An investigation of the *Movimento da Escola Moderna* (MEM) pedagogy and its contribution to learning to learn in Portuguese Pre-schools

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Abstract

This study identifies how the Movimento da Escola Moderna model for pre-school education works in practice, and how it has supported (or constrained) effective learning processes associated with 'learning to learn'.

The conceptual framework combines socio-cultural theories of learning with literature on learning to learn and the role of interactions in teaching-learning processes to identify effective learning processes in the early years.

Adopting an interpretative approach to research, the study involves an in depth case-study approach with ethnographic elements. Two classrooms, purposefully selected, provide detailed illustrative cases of the MEM pedagogy. Data included observations (participant observations and video recording), interviews (adults and children), and documents. The analysis combined a theoretically driven framework with grounded analysis.

This research showed that relationships between the MEM model, its practice and the children's participation in processes that promote 'learning to learn', are not straightforward. Both classrooms provided 'communities of learning' where children were encouraged to self-regulate their learning and engage in collaborative activities, transforming their identity from 'child' to 'learner', and their leading activity from 'playing with others' to 'learning with others'. It was found that the structural and dynamic quality of day-to-day practices sometimes had contradictory effects, which led to the identification of some conditions required to guarantee such change for all the children including the youngest and those less participative.

The implications for further development of the MEM model and teachers' practices are discussed. These findings contribute to understand the role of pedagogy in mediating, from an early age, the development of a life-long learner.

I hereby declare that, except where explicit attribution is made, the work presented in this thesis is entirely my own.

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"...the schoolroom situated in a broader culture.
That is where, at least in advanced cultures,
teachers and pupils come together
to effect that crucial but mysterious interchange
that we so glibly call *education*".
(Bruner, 1996:44)

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List of abbreviations

A&P – Activities and Projects time

AC – Activities Chart

CG – Curricular Guidelines for Pre-school Education in Portugal.

CM – Council Meetings

CT – Communication Time

ECE – Early Childhood Education

FCM – Friday (afternoon) Council Meeting

IoE – Institute of Education

IPSS – *"Instituições Particulares de Solidariedade Social"*- Independent not-for-profit organisations (charities).

MCM – Monday (morning) Council Meeting

ME – Ministry of Education

MEM – Movimento Escola Moderna

ZPD – Zone of Proximal Development

Chapter 1 Introduction

This thesis is concerned with a pedagogical model that has been developed in Portugal over the last 40 years by a teachers' movement: the Movimento da Escola Moderna (MEM – "Modern School Movement") concerning all levels of education from pre-school to university. The study aims to understand the cultural milieu of two particular pre-school classrooms which have adopted this model, and to investigate how its application may promote or constrain effective learning processes leading to *learning to learn*.

A number of pedagogical models have been developed throughout the history of ECE by teachers, researchers and educationalists following the ideas of a particular psychologist, pedagogue or philosopher (Montessori, Froebel, Dewey, Freinet, Steiner, Piaget, Vygotsky) or by the collaborative agency of groups of people responding to social political problems such as lack of democracy (for example MEM, Reggio Emilia), illiterate society (MEM, João de Deus among others), war (for example Education for Peace) and poverty or inequalities in society (such as High-Scope, Anti-Bias Curriculum). These models constitute strong references for teachers' pedagogic identities (Oliveira-Formosinho, 1998; Cabral, 2006) and create different mediation contexts for children to learn (Rogoff, Matusov and White, 1996; Oliveira-Formosinho, 1998; Schweinhart, 2005). The adoption of a pedagogical model by teachers has been associated with the quality of their teaching practice (Epstein, Schweinhart and McAdoo, 1996). Pedagogical models are usually coherent and well established frameworks, which can help to bring theory and practice together (Evans, 1982; Formosinho, 1996). According to Evans, a pedagogical model is an:

> Ideal representation of the essential philosophical, administrative, and pedagogical components. It constitutes a coherent, internally consistent description of the theoretical premises, administrative policies, and instructional procedures presumed valid for achieving preferential educational outcomes (1982:107).

My interest in pedagogical models and how they construct socio-cultural environments where learning takes place has its roots in the theoretical and practical conflicts encountered in my professional life (Appendix 1 Researchers' professional biography). My encounter with the MEM model (in the 1990s) proved to be a defining moment in my life as a teacher. It was through an engagement with MEM that I discovered the

work of Vygotsky, and began to reflect and question my own views of young children, how they learn, and on what is the role of schools and teachers. Seeing children as citizens rather than little naive people; seeing schools as places where children could discover the world and be supported in creating meanings, rather than as places where most experiences were pretend ones, and imagination and fantasy the main tools to relate with the world; valuing the educational role of the pre-school teacher in children's learning rather than just caring for children and 'allowing' their development to unfold. These were particular challenges which motivated my continuing study. I became particularly interested in studying the MEM pedagogical model, its theoretical and practical propositions, and particularly its realisation in practice.

The debate about how education should be envisaged in order to better respond to the challenges of the 21st century is a complex and ongoing process and must address critical factors such as rapid and varied social, economic and political change. The information society and the global village, and the economic and social fragmentation of society are just two aspects of this rapid change. In this context, two educational aims have been considered of central importance particularly in western democratic societies: first, that education should concentrate more on developing the learner, because *learning to learn* is what ensures the ability to continue learning in diverse contexts through life (Wells and Claxton, 2002b); secondly that there should be concern about developing the citizen, about learning to *participate in a democratic society* and "develop an effective sense of participating in an enabling community" (Bruner, 1996:76). These educational aims are deeply embedded in both the Portuguese Curriculum Guidelines for pre-school education and the general aims of the MEM.

Although the 'ideal representation' (Evans, 1982) of the MEM model might look promising in promoting the learning processes that empower children as life-long learners and committed citizens, there is insufficient detailed research on how these practices are collaboratively re-constructed by MEM teachers with their groups of children in real contexts. Within the MEM movement, practices are constantly reflected on and questioned through a continuous process of sharing and learning together. That is how the pedagogical model has been constructed and reconstructed through the years. But it was only in the last decade that researchers from the academic community have been engaged in that dialogue, and new insights have been added to this learning

community (Nóvoa, 1996). Research can help to bridge theory with practice in a process of mutual reconstruction.

Complementing my personal interest in deepening the study of the MEM model in practice, it became particularly relevant to question how it was able to mediate the processes of learning considered necessary to respond to the aims of education in the 21st century. In the interest of achieving sufficient depth of the analysis, for the purpose of this study, only the first of these aims - learning to learn - was considered.

The theoretical background of this study is informed by socio-cultural approaches to learning where "culture is seen to play a large role in shaping the development of individual minds; and individuals' thoughts and deeds serve to maintain or to alter the cultural milieu" (Wells and Claxton, 2002a:3). In this perspective, pedagogical models may be seen as cultural tools which mediate action in classrooms (Wertsch, 1998: 16). Such tools may afford some kinds of learning and development but they can also constrain possibilities for learning as they construct a particular way of seeing things in the world around us. In studying the MEM ECE (MEM Early Childhood Education) model in practice and its contribution to learning to learn, this study takes the challenge of looking at classroom communities as communities of learning.

This thesis is organized in nine chapters. Chapter 2 will contextualize the study in the Portuguese field of ECE. A brief account of the Portuguese ECE scene, the Curricular Guidelines for Pre-school Education (CG) and the use of pedagogical models in Portugal precede the presentation of the MEM pedagogical movement, its aims and dynamics and a description of its pedagogical model for ECE.

Chapter 3 sets up the theoretical background to the study. It relies on selected concepts of the socio-cultural approach to study children's learning and the pedagogical context in which such learning takes place. From social practice theory, it uses the concept of learning as 'change in participation in communities of practice' (Lave and Wenger, 1991; Rogoff, 1998) which enables a focus on the processes of learning that children engage in while in their classroom. Focusing on classroom practices, it conceptualises pedagogical models as mediating tools (Wertsch, 1991) in the learning processes within classroom communities. The second section of this chapter conceptualises learning to learn as a key focus for examining how the MEM model might contribute to empower children as life-long learners. It first presents how learning to learn is conceptualised in

this study, and secondly reviews the research evidence on how interactions (adult-children, peer and whole-group) contribute to developing children's learning dispositions and the abilities associated with learning to learn. This section establishes what, in this study, are considered as effective learning processes associated with learning to learn.

Chapter 4 presents the conceptualisation of the study, linking the research aims and questions with the theoretical and analytical framework and the research design and methods. Discussing different approaches to the study of pedagogy and pedagogical models, it locates this study within an interpretative paradigm using in-depth case-study with ethnographic elements as the research approach that is best suited to respond to this inquiry. It then presents the research design, data collection methods, schedule, and an account of the analytical process.

Chapter 5 is the first account of results, presenting the two classroom communities. The first part presents the two institutional and local community contexts (the nursery environment, the local community, the staff and team work). The second part focuses on the classroom communities by presenting its members (teacher, assistant and children and families), as well as some structural features of the MEM model in context such as: the classroom space and materials; time routine; parents, community and children's learning; and planning and evaluation system.

Chapters 6, 7 and 8 deal with the analysis of the learning culture and the learning processes that take place as children and adults inter-act[1] in the classrooms where the MEM model was being applied. Specific times were given particular importance within the MEM model, which seemed to be relevant to children's learning to learn: chapter 6 Council Meetings (CM), chapter 7 Activities and Projects (A&P) and chapter 8 Communication Time (CT). A separate analysis of each of these activities in each context is followed by a summary discussing the findings related to the contribution of each component to our research questions.

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[1] The word inter-act will be used in order to stress the joint actions of both teachers and children which encompasses both talk and action.

Chapter 9 presents the concluding discussions, revisiting the research questions and discussing the findings of the case studies. The implications for further development of the MEM model and teachers' practices are discussed.

Despite the specific cultural context of the account (Portugal, pre-school education, and MEM pedagogy) this study will be of interest to the field of ECE and education in general. The inquiry focuses on a deep understanding about the link between pedagogy and learning and how pre-school practices promote the development of learning dispositions and abilities that are of critical importance for life-long learning.

Chapter 2 Contextualising the study

2.1. Early Childhood Education in Portugal

Pre-school education in Portugal is considered the first stage of basic education; it accommodates children between 3 and 6 years old. Although not compulsory, since 1996 the state has been trying to provide places for all children whose parents want them. In 2005/2006, 78.4% of all 3 to 6 years old children attended pre-school education (Ministério Educação, 2007).

This section will provide brief information about the characteristics of ECE in Portugal; a more detailed account of ECE in Portugal is provided in Appendix 2 "Early Childhood Education in Portugal"

Pre-school settings

Pre-school education in Portugal is provided at different settings – *jardins de infância* - belonging both to the state and the private sectors. The state sector includes nursery schools (51% of children) and social services day-centres (1.4 %). The private sector includes *Instituições Particulares de Solidariedade Social* (IPSS) day-centres belonging to charities (30.6%) and for-profit nursery schools (17%).

Nursery-schools are run by local authorities and are funded by the Ministry of Education. In rural areas they usually have one classroom and are quite isolated from other educational establishments. They are free and parents only pay for after-school (5+ hours) schemes, based on their ability to pay. Enrolment priority is given to oldest children.

IPSS day-centres are private charities (non-profit) usually linked with social associations or with the church. Generally they integrate babies and toddlers and also after-school activities for children in primary schools. Priority is given to children of working parents or to children considered at risk. They open long hours (10+ hours) all year round. Parents pay according to their economic resources.

General principle and objectives of pre-school education

The Pre-school Education Law establishes as a general principle:

> Pre-school education is the first step in basic education in a life-long educational process. It is complementary to family education, acting in close partnership in order to provide a balanced development of the child with a view to his/her full integration in society as an autonomous, free and co-operative individual.(Ministério da Educação, 1997:15)

This general principle highlights the educational aim of promoting both individual development or learning, and social development as a citizen.

Integrated view of ECE

Despite Portuguese ECE services having a history of dualities and conflicting views - between care and education, private and public services, separation /integration with primary education, maturationist / educationalist views of learning (see Appendix 2), since 1997 they have been pursuing a more integrative and accessible educational system for most pre-school children (Cardona, 1997; Ministério da Educação, 2000; Vasconcelos, 2005). The following basic conditions provide evidence of these developments:

- Services must combine education with care and respond to family needs.
- Teachers' training is a four year degree.
- Every pre-school classroom (maximum 25 children) must have a qualified teacher who must implement the Curricular Guidelines for Pre-school Education (Ministério da Educação, 1997).

Curricular Guidelines

The Curriculum Guidelines for Pre-school Education (CG) foster a broad and integrated approach to learning where the child is seen as 'the subject' (agent) of the educational process – which means starting with what the child knows and valuing his/her knowledge as the basis of new learning. The new learning is intended to develop curiosity, a critical approach and the ability to learn how to learn" (Ministério da Educação, 1997:22).

The CG uses, for the first time, areas of knowledge to define the curriculum. This makes it quite distinct from the traditional organisation in areas of development (cognitive, socio-affective, motor) and is based on the view that development and learning are not separable (Ministério da Educação, 1997). Children should have access to and engage with different "areas of knowledge" and learning, including content knowledge

(concepts, facts, symbols, products), skills, attitudes (critical), and values (spiritual, aesthetic, moral and civic) which are socially relevant. Areas of knowledge are:

- Personal and social development.
- Expression and communication including different domains:
    - Movement, musical, art and dramatic expressions
    - Language, literacy and initial approach to writing
    - Mathematics.
- Knowledge of the world.

The CG does not advocate a particular pedagogical model but encourages nursery teachers to develop their own pedagogies within a socio-constructive and ecological approach.

Pre-school pedagogical models in Portugal

The adoption of pedagogical models (such as High-Scope; MEM) in ECE in Portugal is recent. Some studies indicate that only 25% of ECE teachers follow a pedagogical model (Vasconcelos, 1990; Lopes-da-Silva, 2004). This resistance to adopting pedagogical models results from the view that they would limit the creativity of the teacher to answer to the child's inner needs (Oliveira-Formosinho, 2001). Nursery teachers would rather use a potpourri of pedagogic strategies (projects, topic work, and free play) than adopt one 'prescribed' pedagogical model, particularly one which introduces young children to learning within different subject knowledge.

An increasing appreciation of the educational role of nursery teachers, together with the dissemination of worldwide experiences and research, probably explain why the application of pedagogical models start now to be seen as a legitimate tool for achieving quality education (Formosinho, 1996; Oliveira-Formosinho et al., 1996). In the case of the MEM pedagogy, such interest may also be explained because it seems to offer an approach which responds to the new trends of the ECE system (with its emphasis on citizenship and democratic education, the role of the social/cultural context in providing significant learning experiences and a continuum with the primary school system), including the CG.

2.2. Movimento da Escola Moderna (MEM)

During the last 40 years, this Portuguese teachers' movement has been developing a pedagogy which guides their educational practices. This movement started its activity during the early 1960s under a political regime that did not allow freedom of union or organisation. Some teachers, prevented from teaching in the state sector, started to develop an innovative practice in some private schools inspired by the French pedagogue Freinet. They developed an approach based on democratic principles and inclusive education. This pedagogical model has been consolidated over the years by a continuous process of theoretical reflection and practical innovations, undertaken by teachers from different sectors of education, ranging from pre-school to higher education, all working cooperatively.

The MEM has three broad educational aims:

- Initiation to democratic practices.
- Re-institutionalisation of values and social meanings.
- Cooperative reconstruction (re-creation) of culture (Niza, 1992).

The three aims of MEM focus on the personal and social development of teachers and students as active, democratic citizens as well as on the broader objective of their cultural development. The first aim is the exercise of cooperation and solidarity in a democratic community. The second aim emphasises the need to constantly reflect upon and clarify values and social meanings and to empower both teachers and students to take decisions and institute group rules through a process of cooperation and continuous re-institution. This also encompasses the active engagement of the group in social problems and political values(González, 2002). Finally, the third aim is the cooperative co-construction of culture. These aims imply a view of learning as a social-cultural process, and as a participatory process where groups not only get access to the cultural knowledge of society, but also reconstruct it in the dialogic process of meaning making.

The MEM movement aims for a society that is democratic and based on individuals' solidarity with each other. Learning is seen as an empowering process, which provides tools for autonomous and responsible citizens to actively engage in and act in the world with solidarity as well as for personal and social fulfilment. School is seen as a community where the cultural experiences of individual members are shared and

enriched by encounters with the inherited knowledge of society accumulated through the history of their sciences and cultures (Peças, 2005).

MEM has fifteen regional sectors all over the country and about 2,000 members, who meet regularly in a continuing development programme.

Three principles cross both the educational model and the formative model of teachers' development:

- *Circuits of communication* – the sharing of experiences aims to produce new knowledge and development.
- *Educational co-operation structures* - cooperative organisation is deeply rooted in MEM culture and has advantages in three dimensions: cognitive, educational and socio-political.
- *Direct democratic participation* - democracy is seen more as a value than as a political regime, and as such should be experienced as directly as possible and not representatively as in most democratic societies (Niza, 1998; González, 2002)

2.2.1. The MEM pedagogical model for pre-school education

Based on the same fundamental aims and strategic principles, the MEM educational approach has been developed for each sector of education. Three conditions are fundamental for early childhood education:

(1) Groups are organised with children of *different ages and abilities* - this condition aims to enrich the child both socially and cognitively, creating a zone of capability that extends beyond what the child is capable of doing on their own by including those activities they can successfully realise with the support of the teacher and peers, in an inclusive and diverse group (Niza, 1992). From the beginning of MEM, teachers have integrated children with special needs into their classes thus promoting inclusive education (Niza, 1992; Peças, 2002). Each year the classroom group integrates new children as well as children from the previous years resulting in mixed-aged groups.

(2) There is a climate of *free expression* - (referring to Freinet's work) reinforced by a group / public critical validation of children's opinions, life experiences and ideas. This is the starting point for teachers to expand children's communication skills and learning.

(3) Children are given *time to play, explore and discover* materials and documents and encouraged to question and "wonder" for themselves. It is felt that only if children have this opportunity will they be able to actively engage in trying to understand the world around them (Niza, 1996).

The curriculum in MEM pre-school classes

MEM teachers work in all types of schools (private, state and voluntary sector), and follow the CG. The MEM model emphasises that children should be introduced to different literacies including not only content knowledge (concepts, skills and knowledge) but also processes and tools used in different areas (arts, science, humanities) (Peças, 2005). Moreover, the MEM model emphasises that children gain control of the learning processes bringing to consciousness the links between the "design and sequence of actions part of the process, and the results or product achievement. Knowledge is co-constructed through the consciousness of the production process in a metacognitive way" (Niza, 1996:145). This implies learning to evaluate and plan or to control, regulate and direct learning and social behaviour.

The MEM model proposes a curriculum that is based on real life problems and motivations presented in a functional and pragmatic way (Dewey, 1956). The central purpose is to provide educational environments (schools) that are deeply integrated in the cultural milieu of the society they serve, instead of constructing a cultural niche removed from the reality of social life (Niza, 1995b): this makes home and school links more effective. In this sense, children's life experiences and individual knowledge are the foundation for the acquisition of new knowledge (Grave-Resendes, 1989). Sérgio Niza a founder of the MEM movement says:

> ...very often, the teacher forgets that when the child enters school, s/he already knows a lot of things. The teacher assumes that the child knows nothing. We want to avoid this ... The teacher should take advantage of everything the student knows, (real life experience outside school) and use it as a starting point to improve his/her knowledge or constructing new knowledge(Niza, 1995a).

Cooperative management of the curriculum

The cooperative management of group life and curriculum is central to the democratic ethos of the MEM model (Niza, 1998). This collaborative responsibility is substantiated through regular classroom Council Meetings (CM), which are the central institutionalised ritual for decision-making in classrooms (Niza, 1991). MEM teachers

see planning and evaluation situations as part of the learning process in which children actively participate through negotiating learning contracts (Niza, 1992; 1996; 1998). This negotiation is very important as it allows children to express their views, and to develop a proactive role in learning. Planning and assessment in the MEM model are interconnected, highlighting its formative character that sees assessment as a means for learning (Niza, 1996; 1998).

In order to support the shared responsibility between the teacher and the children for the learning and life of the group, a set of tools are provided by MEM, called "piloting tools".

The piloting tools

The concept of "piloting tools" is based on the idea that these tools help teachers and children to steer/regulate (plan and assess) what happens in the classroom (individually and as a group) by documenting group life (Niza, 1996). These tools are:

The attendance chart - this is a monthly table with two entries: the days of the week/month on the top row, and children's names on the column on the left. Every morning as children come in, they mark their own presence.

The activities chart - before starting work, children plan and register their choices in the activities chart: a two-way table with all the children's names on the left column and the activities or working areas across the top line. Each child makes a circle in his/her planned activities columns: once the activity is completed they go back and fill in the circle. This activity plan is used as a process of self-reflection about action. Progressively, children learn to anticipate their activities, make their own plans, and self-monitor their work by just looking at the chart and seeing what they have (not) finished. This chart is used to evaluate the work of the group.

Inventories - in all the main areas of the classroom there are inventories of materials and activities written and illustrated by the children that help them to remember and to see the different possibilities for activities within that area. These lists are constructed by the teacher and the children.

The Classroom Diary – this is a weekly register of incidents, desires, conflicts or accounts of events that any group member wants to mark. It consists of four columns: "We liked", "We didn't like", "We did" and "We want". Any child or adult can fill in

the diary at any time during the week. Children can draw or ask an adult, or older child to write for them and the child can illustrate this afterwards. At the end of the week, during the Friday Council Meeting, the contents are analysed and discussed in the class group.

The social rules chart - this is a register of the rules that have been agreed upon to regulate the classroom group. They are always discussed with the group and arise from a real need for the rule.

Responsibilities chart - the socio-centric approach of the MEM pedagogy gives the children responsibility from a very young age for certain duties like taking care of materials, preparing meals, watering the plants, feeding animals, or cleaning the working tables.

All of these tools are part of the group organisation and help children to integrate their own experiences into the whole group. While it might appear quite complicated to keep all these records, and for children as young as three years old to use them systematically, it is important to remember that the MEM groups are mixed-age groups and every year the group has new children as well as children that are already socialised into this organisational structure. The older ones help the new children to assimilate such practices as they come to understand their functions and processes.

In the MEM it is recognised that these institutionalised tools and time periods do not guarantee the establishment of an effective socio-centric approach. For the MEM process to work the adult has to know the child and to work within his/her Zone of Proximal Development (ZPD) providing the support (scaffolding) necessary for the child to move forward. The teacher must accept the child as an individual by listening to, and valuing him/her, and must also assist the child to communicate with the group by encouraging the child to listen to others and to put their individual experiences into the context of the group (Niza, 1996). The curriculum in MEM nurseries is defined by the children's interests and by the experiences provided by the teacher in the classroom (grounded in the CG), in the school or community environment.

Classroom spatial organisation

At MEM nursery-classrooms the materials are organised into different areas, providing children with opportunities to experience different activities and to engage in different epistemological discourses linked with the main content areas of the CG. The different

areas around the MEM classroom are the "Science and Maths Lab", "Art Atelier", "Writing, Editing and Reproduction Workshop", "Library and Documentation Area", "Socio-dramatic Play Area", "Carpentry and Constructions Area" and "Food Education & Culture Area". The materials are organised to be accessible and to allow children to use them on their own. In the MEM classrooms, materials are carefully chosen giving priority to real materials rather than "toys" (i.e. real hammers and screwdrivers in the carpentry area) in order to afford a good quality of work (Niza, 1996).

Time organisation

The organisation of time (see Table 2.1.) is structured around two different units of time, the day and the week, and comprises a total of five hours a day and five days a week, as defined in the Pre-school Framework Law (Ministério da Educação, 1997) [2].

Every morning starts with a planning 'Council Meeting' (CM), followed by one hour of 'Activities and Projects' (A&P). After a break, the group gets together for 'Communication Time' (CT) when some children present their work to the whole class group. The afternoon is devoted to cultural activities: story-telling and drama, cooking, correspondence (following Freinet's tradition of communicating experiences and exchanging letters with different schools), conferences (children's presentations of projects), music and dancing and, very importantly, visits from invited guests such as parents and people from the community. The invited guests come to teach something to the group, usually related to their professional activities or to their special interests or hobbies. The day ends with the evaluation CM.

[2] In Portugal most children attend pre-schools on a fulltime basis.

Table 2.1. The MEM time organisation (pre-school)

Monday	Tuesday	Wednesday	Thursday	Friday
Reception & week planning council	Reception & day planning council	Reception & day planning council	Reception & day planning council	Reception & day planning council
Activities & Projects	Activities & Projects	Outings	Activities & Projects	Activities & Projects
Snack break	Snack break		Snack break	Snack break
Communication Time	Communication Time		Communication Time	Communication Time
Lunch				
Outdoor activities / nap				
Collective cultural activities*	Collective cultural activities	Activities related with outings	Collective cultural activities	Organizing and tidying up
Evaluation council meeting	Evaluation council meeting	Evaluation council meeting	Evaluation council meeting	Friday Council Meeting (week evaluation)

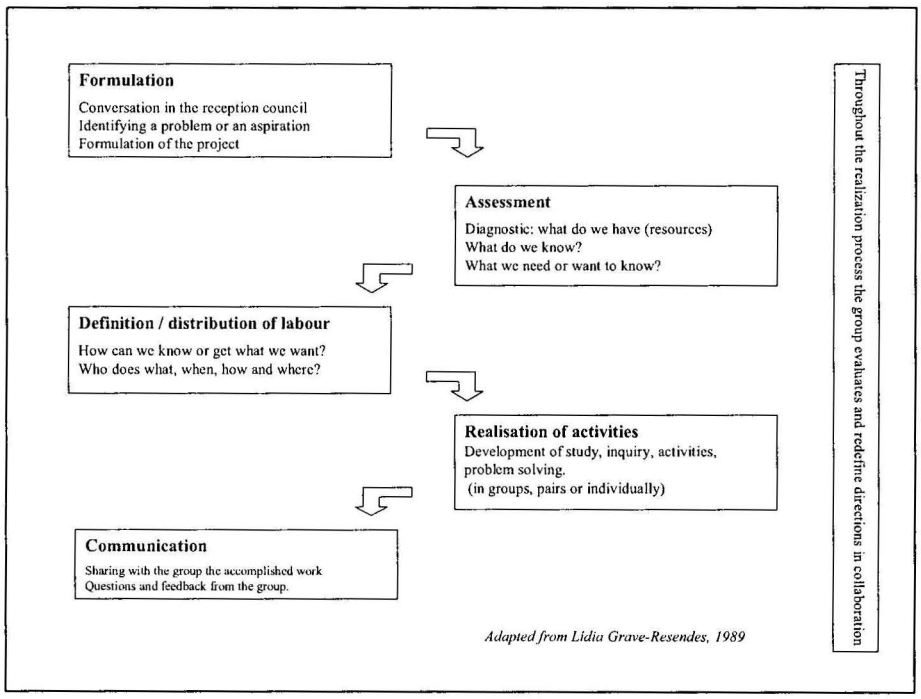
* Collective cultural activities: story telling; drama; cooking; correspondence; activities with parents and community members; conferences; musical expression, PE .....

On Fridays there is an evaluation of the week at Friday Council Meeting (FCM), which starts with the teacher reading each column of the classroom 'Diary'. This is a time when the children and the teacher evaluate the most significant issues of the week (negative and positive incidents, children's realisations) and consider suggestions for future plans. Every fortnight the group evaluates the 'Activities Chart' (AC), being given the opportunity to evaluate the type of activities that each child pursued. The group clarifies why some activities are unpopular and establishes small contracts for the future (see AC in the "piloting tools" section). The group also goes out once a week on a field trip to a site of interest, contacting with the community in order to observe, to question or to interact with local people. Contacts with people and spaces outside the classroom are encouraged to expand children's experiences and knowledge and provide the group with interesting subjects for their learning (Niza, 1996). The routines are organised in a fixed way but should be flexible to respond to the needs of the group and individual children according to the contextual factors of everyday life.

Activities and Projects

Every morning the children engage in autonomous activities pursuing their own interests. They can work alone or in small groups according to their choices and the plans they made at the previous CM. Some of these activities are activities that are limited in time and scope and might include immediate choices of an area without a conscious goal or plan. Progressively, the children are invited to reflect on these activities so that they will start to attribute meaning and purposes, and learn to anticipate and direct their plans towards a goal, engaging with what Niza calls a project conduct (Niza, 1996; Peças, 2005). Some of the children's wishes, questions or problems cannot be answered by simple individual activities. In these cases, the teacher helps the children to accomplish their expressed ideas by engaging in more structured projects. Projects involve a chain of activities that require a "mental design" that together can answer a particular problem or question (Niza, 1996).

Figure 2.1. Project work framework (MEM)



Projects in MEM classes are of different kinds: solving an identified problem in the community (intervention); getting to know about a particular topic or answering a question (inquiry); the concrete realisation of a wish (production) (MEM, 2006). A framework (Figure 2.1.) is used to guide the teachers and to guarantee that they involve

the children in the decision-making process, shaping and directing the path to be followed.

Conception of the learning process

A socio-constructivist / socio-cultural perspective of learning

The conception of learning in MEM pedagogy has been deeply influenced by the work of socio-constructivist theorists such as Vygotsky (1978) and Bruner (1972). Learning is shaped not only by interactions with peers and adults but also by the artefacts or *tools* used in the school community. The idea that learning happens when children participate in activities shaped by a cultural organisation stresses the importance of the contexts (space, materials, time and activities as well as the intellectual tools) that schools provide for learning to occur.

The role of communication

Communication is a central component of MEM pedagogy as a means for social and cognitive development (Niza, 1998). Communication has a double function. Firstly, it can be viewed as a cognitive function that occurs when children are asked to speak about their actions or experiences. In this case, they undergo a reflective process that allows them to better understand and structure what they have to communicate (Bruner, 1972; Vygotsky, 1996). Secondly, communication has a social function, where information is shared and disseminated for the benefit of the group "community" and for public scrutiny. The questions that children ask about someone else's experiences can lead the 'authors' to question themselves and to be more explicit.

Cooperative learning

Cooperative learning implies an engagement of a group of children in an activity with a common goal. The MEM pedagogy credits this learning strategy as the most productive in terms of social and cognitive competences. At nursery schools, this advanced way of learning is promoted specifically in *project work*, as well as through the cooperative management of the classroom. Children begin to take into consideration different points of view and to accept that everybody contributes to the group with their individual participation. A supportive and inclusive ethos promoted by the teacher helps young children to collaborate and to help each other instead of engaging in competitive behaviours and attitudes.

Epistemological analogy between teaching-learning and knowledge development

One of the characteristics of this pedagogy is that instead of trying to develop specific teaching techniques, it aims to incorporate in schools the process by which knowledge is produced in real life. From this perspective, teaching and learning processes are based on the methods used by scientific or cultural processes throughout history. "This is what in MEM is called the epistemological analogy between teaching-learning and socio-cultural development (Science, Techniques, Arts and everyday life) (Niza, 1996:143).

The MEM model rejects "didactic tricks" and simulations, which in Niza's opinion reveal that schools are losing their social meaning, thus disrespecting students (Niza, 1996). Learning within each area of knowledge should aim at that children progressively appropriate both the content and the processes of knowledge construction. The participatory appropriation of scientific knowledge should incorporate the general scientific method of creating knowledge – observing, hypothesising, experimenting, organising, writing and exchanging knowledge – which should take place as early in life as possible. The appropriation of literacy follows in a similar fashion, that is, using the process of writing texts commonly found in our society - production of letters, stories, poems, reports, correspondence, diaries, registers. In the classroom, the writing workshop area, the library and documentation centre and the widely displayed written samples help children to understand the functions and processes of written communication (Folque, 1998). It is by engaging in different types of mediated activities that children come to know and master those activities. This idea is related to Vygotsky's concept of internalisation of higher mental functions from a social level (intermental) to an individual (intramental) level (Vygotsky, 1978).

The socio-centric perspective of the MEM approach proposes an alternative view of pedagogy to the ones that are child-centred or the ones that are teacher-centred. In MEM the group as a community takes a forefront position in a context in which individuals learn in collaboration (Grave-Resendes, 1989; Niza, 1996).

2.2.2. The MEM teacher's continuing development programme

The MEM teacher education system organises its activities in different ways:

Educational co-operative groups – where teachers in local sectors meet in small groups according to their specific interests and needs (mathematics, literacy, etc.) to study, reflect and discuss their own practices and theoretical texts.

Monthly pedagogic Saturdays – each regional sector organises an afternoon of reflection and dissemination of MEM practices. Pedagogic Saturdays include presentations of practices from different sectors of education and general debates about issues of interest (evaluation, curriculum, teacher training, educational laws, etc.) with the participation of teachers from all levels of education.

Initiation to the MEM model – the most experienced teachers introduce new teachers into the MEM pedagogical model through a two-year training. The first year is concerned with the presentation of the model and initial implementation trials; the second year is based on developing contracts focused on the problems faced by the teachers when implementing the model. Since the early 1990s these in-service courses have been accredited by the CCPFC (National In-service Training Scheme Scientific Board).

Specialised meetings - these are national meetings to debate certain issues more thoroughly (e.g. mathematics education; supporting special needs students; supporting teachers' development).

Easter National Meeting - for MEM members only, this meeting aims to give a more in-depth reflection on the life of the movement, the MEM pedagogy and discussion of a particular theme (e.g. current education policies).

July National Congress - open to other teachers and researchers, this conference lasts for four days and provides an opportunity for MEM teachers to share their practices with each other: usually, about eighty presentations are made, from all sectors of education, pre-school to university, alternated with general debates and discussion panels and presentations of research related to the model. There is also an exhibition of children's work from schools.

"Escola Moderna" magazine – published three times a year with papers written by MEM teachers. It includes interviews, accounts of practices, theoretical papers and research. The magazine is disseminated to all MEM members and to teacher's training colleges and polytechnics, as well as to educational services.

Chapter 3 Literature review and theoretical background

This chapter is structured in three main sections: socio-cultural approaches to learning, learning to learn and learning through interactions. The first section sets this study within a general theory of learning which emphasises the cultural and socially constructed nature of learning. Some concepts within the socio-cultural theory were seen as providing a good theoretical basis to investigate a pedagogical tool (MEM model) and how it mediates children's learning processes in communities of practice such as classrooms. The second section clarifies how the concept of learning to learn is conceived in this study and identifies the learning processes and pedagogical tools that are associated with this educational aim. Finally, a review of the literature on interactions and their impact on such learning processes helps to deepen the analysis of the social process generated in classrooms applying the MEM model.

3.1. Socio-cultural approaches to learning

Inspired by the work of the Russian psychologist Lev Vygotsky, socio-cultural approaches to learning look at the central role of culture in shaping human minds. As people act, interact and participate in joint activities, they are introduced to the cultural ways of constructing knowledge as well as to the knowledge which has been accumulated throughout history in their societies. Younger and less experienced members of societies are introduced to activities which require particular skills, knowledge and ways of knowing, attitudes and values (Wells and Claxton, 2002a). Within the socio-cultural tradition, there are different approaches or theories that differ in the way they conceptualise the learning process and the relationship between the individual and the social, offering different perspectives on the conceptualisation and study of the learning process (e.g. situated learning, social practice theory, socio-semiotics, activity theory). A review of each of these approaches is not within the scope of this study. However, discussion of some of the core concepts within socio-cultural theory will help to define how such a theoretical background may illuminate the study of the MEM pedagogical model (theory and practice) and its potential to promote effective learning processes in young children. The concepts of mediated action, learning as change in participation, and the zone of proximal development (ZPD), are crucial theoretical constructs to be discussed.

3.1.1. Mediated action

At the core of socio-cultural theory is the view of human action as a mediated action through the use of artefacts which are the product of human cultural activity (Vygotsky, 1978; Cole, 1996; Wertsch, 1998). The use of cultural artefacts or tools changes individual consciousness and the way in which they act on the world. Wertsch considers mediated action or "individuals operating-with-mediational-means" as the irreducible unit of analysis of human functioning (Wertsch, 1991).

Vygotsky distinguishes material tools from psychological tools. Examples of psychological tools are language (considered the tool of tools), numbering systems, mnemonic techniques, writing, conventional signs, maps and diagrams. Psychological tools act as extensions of the mind, whereas material tools, such as a hammer, act as an extension of the body. The MEM model uses a specifically designed set of piloting tools (psychological) to support cooperative management of the curriculum in a democratic classroom organisation. In addition to these two types of tools, other human beings can also act as mediating tools in meaning making.

Wertsch (1991) uses Gibson's concept of affordances to emphasise the agency of individuals in their relation to tools. Individuals might recognise and appropriate the affordances of tools, but they may also resist and/or use them for their own goals, which might contradict the goals the tools were originally produced to serve (Wertsch, 1998). From this perspective, the use of mediation tools can empower or enable action, but it can also limit or constrain the forms of action we undertake, depending on the affordances of such tools for individual actions. Material tools, as well as psychological ones, have objective properties as well as perceived properties and potential for goals achievement (Wertsch, 1998; Claxton, 2002).

Vygotsky views language as the 'tool of tools'. In his view, language is both a communicative tool used to share and co-construct knowledge and develop culture, and a psychological tool used to organise thinking and regulate our behaviour (to reflect, to plan) (Vygotsky, 1978).

3.1.2. Learning as changing in participation

Another central idea in socio-cultural theories is that learning and development is intrinsically social; the new skills and knowledge that children develop are appropriated from social interactions with more experienced people. According to Vygotsky:

> Every function in the child's cultural development appears twice: first on the social level, and later, on the individual level; first between people (interpsychological), and then inside the child (intrapsychological)... All the higher functions originate as actual relations between human individuals (Vygotsky, 1978:57).

This is what is called the internalisation model of development as it emphasises how individual learning is shaped by the socio-cultural context in which it takes place. The internalisation model has instigated many debates, such as that over a passive versus an active role for the learner, giving place to different perspectives of learning: transmission, acquisition or appropriation, or "knowing how" (Wertsch, 1998).

This model of internalisation has been also criticised for its limitations in accounting for the rise of new ways of knowing and acting in the world, and the role of individuals (learners) in the creation and transformation of cultural artefacts and new ways of understanding and engaging with the world (Engestrom, 1999:26). Another criticism has been levelled at the view that situates the individual as separate from the social, thus not mutually constituted. This privileges the individual activity (mental) as opposed to the joint activity (mental) (Matusov, 1998). These criticisms have been countered by a number of followers of the Vygotskian perspective (Rogoff, 1990; Lave and Wenger, 1991; Matusov, 1998; Rogoff, 1998; Wells, 1999) who suggest a participation model where the learner takes a more active role in changing the contexts of joint actions and cultural co-construction (Daniels, 2001:42). According to this view, through participation in everyday life, new problems and new ways of doing arise, and thinking and valuing are generated. The child also contributes to the negotiation of meaning in social interaction (Rogoff, 1990:195), such as in teaching-learning situations where the child is influencing (sometimes resisting) the teacher's intentional actions. Teaching and learning become deeply interconnected and can be conceived as a co-constructive process.

According to Lave and Wenger (1991) learning occurs as individuals participate in particular (often many) *communities of practice*. Communities of practice are characterised according to Wenger (1998:73) by having a joint enterprise, a mutual engagement that binds members into a social entity (how it functions) and a shared repertoire of communal resources (such as routines, artefacts, vocabulary, sensibilities) that members have developed over time (what capability it has produced). Practice in social theory is the social production through constant negotiation of meaning entailing

participation (relations of mutuality) and reification (production and use of tools) (Wenger, 1998:52).

This conceptual and analytical tool is particularly relevant to the study of the MEM ECE pedagogy, as it permits identification and analysis of children's active participation in creating meanings within the communities of practice while considering the learning processes afforded by such a pedagogical tool. In practice, the 'reified' model is reconstructed by both the teacher and the children as they negotiate meanings in particular contexts. Moreover, in a model that aims to promote children's active participation in their learning in collaboration with others, it is particularly relevant to investigate how this process occurs.

Another distinctive tenet of social practice theory is the view of learning as change in participation in communities of practice. Learning is located in the process of co-participation between individuals in ongoing practice. Learning occurs as individuals' "legitimate peripheral participation" develops into participation and mastery of more complex skills and knowledge relevant to the practice of the community and enables them to take a full participation role. This concept requires that attention is drawn to

> the point that learners participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move towards full participation in the socio-cultural practices of the community. 'Legitimate peripheral participation' provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artefacts, and communities of knowledge and practice (Lave and Wenger, 1991:29).

Lave and Wenger talk about change in newcomers' identity and motivation as they move towards full participation changing knowledge, skill and discourse. They point out how learning how to talk the specialized language of the community is part of a change in participation (Lave and Wenger, 1991:105).

Barbara Rogoff has also referred to the process of learning as 'apprenticeship in thinking' relating to a view of learning and cognitive development centred in social practices. Later, she came to define learning as transformation of participation (Rogoff, 1990; 1998). Rogoff points out that the focus is on "people's active changes of understanding and involvement in dynamic activities in which they participate" (1998:690).

Barbara Rogoff (1998) listed some features of individual participation that can be used to evaluate learning:

- The roles people play including leadership and support of others.
- Their changing purposes for being involved, commitment to the endeavour.
- Their flexibility and attitude towards change in involvement (interest in learning rather than rejection of new roles).
- Their understanding of the interrelations of different contributions to the endeavour and readiness to switch to complementary roles (for example, to fill in for others).
- The relation of the participant's roles in this activity to those of other activities.
- Their flexibility and vision in contributing to revision of ongoing community of practices (1998:696).

Other researchers in the field of early childhood education have been using this concept of learning as changing in participation (van Oers, 1999b; Carr, 2001a). Carr expresses change in participation in terms of five features: taking an interest, being involved at an increasing complex level, persistence with difficulty or uncertainty; communication with others, expressing a point of view, an idea or emotion and taking responsibility (Carr, 2001a:17).

It is important to remember that Lave and Wenger's analysis and concept of peripheral participation should not be considered as a pedagogical strategy or a teaching technique. "Learning through peripheral participation takes place no matter which educational form provides a context for learning, or whether there is any intentional educational form at all" (Lave and Wenger, 1991:40). They argue that their theory offers an *analytical* viewpoint on learning, and an understanding of learning.

The process of change in participation in communities of practice is not a smooth and linear one. Some contradictions arise as individuals participate (or not) in shared endeavours, for example, in the concepts of learning and teaching, the different motivations of learners or teachers, their individual goals and their differential power. According to Lave and Wenger, multiple viewpoints are characteristic of participating in a community of practice; communities of practice change as they incorporate newcomers with different identities, knowledge and perspectives some of which are

naive and fresh and raise new ways of negotiating meaning (Lave and Wenger, 1991:117).

Promoting change in participation in a community of practice is a complex process which entails power relationships within the community. When actors are kept in a peripheral position and inhibited by the social structures (roles, rules, division of labour, and access to resources) from participating more fully, this is a disempowering position (Lave and Wenger, 1991). Lave and Wenger argue that a crucial factor for increasing participation is the transparency of the socio-political organisation of practice, of its content and of the artefacts engaged in practice, making their meaning visible (Lave and Wenger, 1991:105). Central to becoming a full member of a community is to have *access* to a number of ongoing activities, old-timers, and other members of the community; to information, resources; and opportunities for participation.

3.1.3. The concept of ZPD

The views of learning as internalisation or participation are linked with Vygotsky's concept of the Zone of Proximal Development (ZPD). Vygotsky defined ZPD as:

> The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky, 1978:86).

The ZPD, thus, is the zone where assistance from others could lead the child to perform a task that he/she could not perform independently. Such assistance has been generally referred to as 'scaffolding' (Wood, Bruner and Ross, 1976), assisted performance (Gallimore and Tharp, 1990) or guided participation (Rogoff, 1990).

According to Wood and colleagues, the role of the adult 'scaffolding' the child in the performance of a task includes: "recruitment of the child's interest to the task, establishing and maintaining an orientation towards task-relevant goals, highlighting critical features of the task that the child might overlook, demonstrating how to achieve the goals and helping to control frustration" (Wood and Wood, 1996:5). Although the concept of scaffolding has been generally adopted by researchers and educationalists (Vasconcelos, 1999) some criticisms have arisen: for instance that the concept of scaffolding was often limited to adult-child face-to-face interactions in performing a specific task, usually with one right solution. According to Rogoff (Rogoff, 1990; 1995;

1998) the view of an adult scaffolding the individual child's performance in completing a task, does not fully account for children's learning in social situations.

Rogoff (1990) conceptualised the support children get from adults and more experienced peers as 'guided participation', which involves providing bridges from what is known to the new, structuring situations and transferring responsibility. As her studies from children's development in different cultures clearly show, this support is not restricted to one-to-one interactions but can also be found in the possibilities children have to participate in social practices with older members (peers and adults) of their communities and learn the different skills and abilities relevant for such practices.

> The concept of guided participation refers to the processes and systems of involvement between people as they communicate and coordinate efforts while participating in culturally valued activity. This includes not only the face-to-face interaction, which has been the subject of much research, but also the side-by-side joint participation that is frequent in everyday life and the more distal arrangements of people's activities that do not require copresence (Rogoff, 1995:142).

Such limitations have been recognised by other socio-cultural researchers who conceptualise the ZPD in different ways. Lave and Wenger (1991) categorise three different conceptualisations of the ZPD. First, the scaffolding view (which is the most common and presented above). Second, a cultural interpretation which defines ZPD as "the distance between the cultural knowledge provided in the Socio-cultural context – usually made accessible through instruction – and the everyday experience of individuals"(Lave and Wenger, 1991:48); this view is based on Vygotsky's distinction between scientific and everyday concepts. Third, research within activity theory (Engestrom, 1987; Edwards, 2004b) and social practice theory (Lave and Wenger, 1991; Wenger, 1998) share a 'collectivist or societal' perspective, which "extends the study of learning beyond the concept of pedagogical structuring, including the structure of the social world in the analysis, and taking into account in a central way the conflictual nature of social practice"(Lave and Wenger, 1991:48). According to Lave and Wenger, the first two interpretations of the ZPD are still based on a narrow conception of the process of learning through the "process of internalisation viewed as individualistic acquisition of the cultural given" (Lave and Wenger, 1991:48). Alternatively, the third interpretation conceptualises learning as a process of participation where the role of learners is an active one and there is scope for transformation.

> We place more emphasis on connecting issues of socio-cultural transformation with the changing relations between the newcomers and old-timers in the context of changing shared practice (Lave and Wenger, 1991:49).

Some of the core concepts of the socio-cultural approach to learning raise, analytical issues that are crucial for the study of the MEM pedagogical model. For example, attention must be given to the mediational means offered by the MEM pedagogy. Recognising that children's learning in the ZPD can be supported at different levels (adult-child interaction, peer interactions, material and symbolic tools and activities and social practices) these different foci of analysis should be included in the study of the MEM pedagogical model. One other important issue is the view that teaching and learning are mutually interconnected in a co-construction process occurring in social practices, emphasising the agency of both teachers and children in making use of the MEM pedagogical tools. A third issue deals with how we conceptualise learning for the purpose of this study. Drawing on the participation model and social practice theory (Lave and Wenger, 1991; Rogoff, 1995; 1998) learning means change in participation in social practices from a peripheral participation towards a greater participation in the classroom community. This analytical approach allow us to focus on the *processes* of teaching and learning and to shed light on their day-to-day co-construction, and the meanings that are being created in classrooms operating with the MEM pedagogical model as a mediating cultural tool.

The classroom community is seen in this study as a *community of learners*, an analogy with a community of practice, where learning is the 'shared enterprise'. The challenge of using such a term is evident, as ECE classrooms are not always communities of learning. In some ECE classrooms, the shared enterprise can be just caring and safety/protection or simply free play and enjoyment. Going beyond such a view and looking at how ECE can operate as learning communities is essential in order to consider the contribution of ECE to life-long learning in the 21st century.

3.2. Learning to learn

The concept of learning to learn has been widely used in a body of educational research that puts a major focus on the learner's progressive control over his/her learning processes. This body of research tries to identify how teachers and classroom practices

can support children in the process of being increasingly and gradually self-regulatory and autonomous learners.

3.2.1. Metacognition and metalearning

The central role of metacognition in learning to learn has been extensively written about. Flavell (1979) was one of the first psychologists to identify metacognition as "the active monitoring and consequent regulation and orchestration of information-processing activities in relation to the cognitive objects or data on which they bear" (Flavell, 1979:232).

Watkins points out six different ways in which this interest has been explored in educational research and practice: Thinking about Thinking; Learning to Think; Learning to Study; Learning How to Learn; Learning to Learn; Learning about Learning (2001:1).

The ability to think metacognitively, which helps children to "learn how to learn", has been identified as one of the most powerful conditions for effective learning (Pramling, 1988; Bruner, 1996; Pramling, 1996; Astington, 1998; Wells, 1999; Muijs and Reynolds, 2001; Watkins, 2001). The role of metacognition in children's learning is seen as promoting awareness, responsibility and control over learning.

> Modern pedagogy is moving increasingly to the view that the child should be aware of her own thought processes, and that it is crucial for the pedagogical theorist and teacher alike to help her to become more metacognitive – to be as aware of how she goes about her learning and thinking as she is about the subject matter she is studying. Achieving skill and accumulating knowledge are not enough (Bruner, 1996:64).

Metacognition has two components: knowledge of cognition and regulation of cognition (Flavell, 1979; Schraw, 1998). Knowledge of cognition refers to what a person knows about one's own cognition or about cognition in general, and includes three types of metacognitive knowledge: declarative (knowing about oneself as a learner and the facts that influence one's performance), procedural (knowing how to do things) and conditional (knowing when and why to use declarative and procedural knowledge). Regulation of cognition is about having control over one's learning; regulatory skills include planning, monitoring, and evaluation.

Although metacognitive thinking does emerge with age, research tells us that it can also be dependent on educational experiences mediated by adult-children interactions and

particular learning processes (Brown and Deloache, 1978; Vygotsky, 1978). While Flavell did not originally consider pre-school children capable of metacognitive thinking, early capability is now widely recognised and we are now seeing research that explores the role of metacognition in problem-solving (Hwang, 1998), mathematics (Mevarech, 1995) and in the early years curriculum (Pramling, 1996; Fisher, 1998).

Pramling's studies (1988; 1996) in Sweden were among the first to focus on the early development of learning through metacognitive strategies and thinking. She found that young children (three to eight years-old) have particular ways of perceiving what learning is and how one learns. Young children most commonly see *learning as doing*, as either learning a skill or activities or how to behave. Some children also perceive *learning as knowing* facts or information; least commonly children may perceive *learning as understanding,* relating their own learning to a changed way of thinking. Children's understanding of learning as understanding and the process of knowing as something that arises from intentional action constitutes, in Pramling's view, a more sophisticated view of learning. These ways of perceiving learning, although related to age, can be enhanced by particular pedagogical processes. Within the principles and practices of the 'Phenomenographical approach' (Pramling, 1995; 1996), engaging children and teachers in metacognitive dialogues about learning experiences (linking action with reflection) is seen to have particular importance to learning to learn. Pramling (1996) presents a structure of teaching which relates such metacognitive dialogues with three different levels: concrete content (what); structure of content (representations) and learning process (how). At each level, the teacher tries to make the child aware of the different ways of thinking ('variation of thought') different people might hold, in order to increase consciousness about each level.

Pramling's studies evaluate children's metacognitive development through interviews (pre and post intervention) about learning, focusing on what they have learnt and how they went about learning, rather than through observing their use of metacognitive thinking (strategies, talk) during learning tasks. This does not enable an understanding of in which particular pedagogical conditions children were more likely to engage in metacognitive thinking and what metacognitive thinking looks like in terms of children's behaviour.

Larkin (2000; 2006) studied children's use of metacognitive thinking among five and six year olds within an interactive environment with teachers and other students. Larkin

argued that collaboration, communication and joint dialogues gave children and teachers the opportunity to engage in metacognitive thinking and strategies. The need to solve a problem collaboratively, to plan and evaluate one's own and others' strategies provides a context for the teacher to provide metacognitive experiences for the child. Larkin (2000) also showed that the teacher's careful intervention and questioning also facilitates metacognition and working together: the teachers' elicitations of self-learning strategies and reflection about strategies; the teachers' modelling metacognitive thinking; teachers' elicitation of dialogue between children, explaining to each other, and thinking from another's point of view, were all pedagogical strategies that, according to Larkin, seemed to enable children to internalise a metacognitive way of thinking.

Some researchers point out that children's development of metacognition in the pre-school years is related to their development of language and a 'theory of mind' (Bruner, 1996; Astington, 1998). Children's theory of mind relates to children's understanding of another's intentional states (beliefs, thoughts, intentions, desires, emotions), understanding that people might hold different beliefs about the world and that those might change over time (Astington and Pelletier, 1996). According to Astington and Pelletier this understanding is only possible if children have a "mentalistic language (e.g. think, know, believe, expect, wonder, guess, remember) in order to talk about and to work out mutual understandings and misapprehensions" (1996:594). The acquisition of a 'mentalistic language' or a language of thinking is, according to many researchers (Astington and Pelletier, 1996; Pramling, 1996) linked to their experience of interaction with adults (or more experienced peers) who model such language (for example making their thinking explicit; providing rationales for decisions, questioning their own understandings, modelling evaluation) and encourage children to do so (by asking 'why' questions, eliciting talk about ideas, (mis)understandings, strategies for problem solving and feelings).

Watkins highlights the difference between metacognition and metalearning as metalearning covers a much wider range of learning issues than metacognition, including reflection on goals, feelings, social relations and the context of learning (Watkins, 2001:1). According to Watkins, metalearning is inherent to effective learning and it is promoted by "a cumulative process of noticing aspects of learning, developing

conversations about learning, reflecting on learning, and making learning an object of learning" (Watkins, 2003:3) .

The Learning How to Learn Project (L2L), which is part of the Teaching and Learning Research Programme (TLRP), addresses the question of how can we better support changes in schools that will lead to children's learning to learn (James, Black and McCormick, 2003). A particular component of this comprehensive project focuses on children's (as well as teachers') views of learning and the importance of making learning visible through formative assessment, drawing on previous work developed by Black and Wiliam (1998; 2002). The pedagogic practices derived from this work are increasingly referred to as 'assessment for learning' and have been shown to help transform students from passive recipients of the knowledge offered by the teacher to active learners who where able to, and expected to, take responsibility for and manage their own learning (Black et al., 2003). This transformation in the students' role is promoted through the development of metacognitive thinking, particularly in the regulation of cognition (planning, monitoring and evaluating), and in the development of positive learning dispositions (orientation towards learning, facing difficulty, see below). Such abilities and dispositions are particularly fostered in formative assessment situations such as questioning, feedback, sharing criteria, and peer and self-assessment (Black et al., 2003) (see section on feedback in 3.3.1) .

3.2.2. Participatory appropriation of different literacies

Socio-cultural theories of learning complement the concept of learning to learn, by focusing on the children's appropriation of methods and practices of knowledge construction which are part of the socio-cultural inheritance of society. Different ways of knowing and understanding (mathematical, linguistic, literary, historical, scientific, artistic, technological, economic, religious, philosophical) foster different (with some common ground) ways of thinking, finding out or acting, and scrutinising knowledge. All areas of knowledge have accumulated and developed through the years - not only concepts and facts but also tools and activities particular to each area. Wells defines them as "semiotic practices - ways of making meaning" (1999:242).

As Wells points out, "mastering the discourses in which knowledge is constructed, put to use, and critiqued and modified, is a central part of the apprenticeship into each discipline" (Wells, 1999:xvii). Such discourses include both action and genre and are

concerned with patterned ways of doing things that are culturally recognised as a "goal-oriented social process" (Wells, 1999:238); both are structured in terms of the goal in view; and both require for their realisation the strategic deployment of relatively routine forms of behaviour that are appropriate to the prevailing conditions.

Within ECE this view underlies approaches that create environments where different languages (Edwards, Gandini and Forman, 1998) and modes of inquiry such as projects (Katz and Chard, 1989), emergent approaches to literacy or mathematics (Atkinson, 1992), science (Siraj-Blatchford, 2000) or philosophy for children (Lipman, 1991) can evolve. Good ECE environments are the ones that introduce children to different areas of knowledge and literacies within contexts that are relevant to the children and that account for different levels of complexity and abstractness (Pramling, Sheridan and Williams, 2004). Bruner's idea is that "any subject can be taught to any child at any age in some form that is honest" (1996:119). The challenge in early years education is how to link the child's informal knowledge, genres and activities with the ones used by society in different areas of knowledge.

Play is recognised as a leading activity in the early years (Leont'ev, 1981), one that offers strong motivation for children to explore the world and their relationships with others and which is also an activity where children engage in symbolic representations of the world (Vygotsky, 1978; Leont'ev, 1981; van Oers, 1999a). Van Oers research (1994; 1999b; 1999a) has explored ways of linking children's play with the precursors of authentic learning activity and he proposes that, for this transition to occur, children must engage in a form of semiotic activity integrated in play. According to van Oers (1999a) authentic learning entails personal interest and cultural values. "Using culturally available models, pupils construct their own view of the world, bringing sense and meaning together" (van Oers, 1999a:232). Semiotic activity is a reflection on the interrelationship between sign and meaning. This reflection process can be promoted in conversations (with peers and adults) about their play activities, negotiating meanings through language and also through the use of signs (drawings, diagrams, symbols), which are representations of part of children's play activities. Van Oers stresses that semiotic activities should be seen as relevant and interesting for children, so that they can be involved in "authentic learning" (van Oers, 1999a).

3.2.3. Developing learning dispositions

The term "learning dispositions" has been widely used to refer to learning 'inclinations' (Claxton, 1999; Meade, 2000), 'learning orientations' (Dweck, 2000), 'habits of mind' (Katz, 1993) or 'participatory repertoires' (Carr, 2001a).

This includes the way children relate to, are motivated by, and understand the learning activity as well as how they engage in learning or in other social activity. This is what Claxton (2002) calls the 'epistemic mentality' and the 'epistemic identity':

> By 'epistemic' I mean those aspects of a person's make-up that relate to the ways in which they learn and know. Thus, 'epistemic mentality' refers to someone's accumulated ways of knowing, learning strategies, and styles, and their habits of mind. While 'epistemic identity' refers to the person's view of themselves as a learner and knower: what they are good and bad at learning; what is worth knowing; what say they have in the generation and evaluation of knowledge and expertise; and so on (2002:24).

What kind of dispositions equip young children for lifelong learning? Bronfenbrenner (1979) writes about dispositions to think, to persist in tasks, to give opinions and contribute ideas and to work collaboratively. Marzano's meta-analysis of studies involved more than one million students (Marzano, 1998) and highlights two important features: "metacognition is the engine of learning"(:127), so that thinking and reflection are key learning processes, and "The self-system appears to be the control centre for human behaviour"(:126), so that how the classroom engages learners' beliefs and learners' control is crucial. We will look closely into one particular learning disposition – resilience - which is viewed to be at the core of effective learners (Claxton, 1999; Dweck, 2000).

Resilience

According to Carr & Claxton (2002) resilience is:

> ... the inclination to take on learning challenges where the outcome is uncertain, to persist with learning despite temporary confusion or frustration and to recover from setbacks or failures and rededicate oneself to the learning task (2002:14).

The work of Carol Dweck (1986; 2000) has shown that children can display, from a very young age, different attitudes towards learning, whether *learning oriented* or *performance oriented.* Being learning oriented means showing interest in the processes of learning whereas to be performance oriented is to be concerned with the final result

or product. Children with different attitudes towards learning respond to failure or obstacles in different ways. Kamins and Dweck's (1999) study of five and six-year-olds found that, like older children, young children display different approaches to learning and can be categorised as either 'mastery' oriented or 'helpless' according to response to failure or difficulty. In face of difficulty, helpless children are not persistent and give up easily as they usually worry about their lack of ability; whereas mastery oriented children focus on effort and strategies instead of worrying about incompetence. In fact, children's views of intelligence or ability as something permanent (entity view) or something one can develop (incremental view) were associated with helpless and mastery oriented children respectively. Resilience, rather than being a fixed trait, is a disposition that can be developed through educational practices that foster positive self-identity and ability in a supportive environment (Henderson and Milstein, 1996; Dweck, 2000; Watkins, Lodge and Best, 2000; Brown, D'Emidio-Caston and Benard, 2001).

Learning discourses in which children take part do entail particular ways of conceiving intelligence and also different views of the learner. Approaches that focus more on the product rather than the process are associated with children's helpless attitudes towards learning. As Claxton says, in some learning cultures "getting it right is being clever and being clever is being good" (Claxton, 1999:256), focusing on ability as the source of success. In agreement with Claxton, who sees ability centred learning cultures as the enemy of resilience, Resnick (1987; 1995; 1997) proposes that learning discourses should emphasise effort and thinking strategies in order to cultivate the learning dispositions of children. Much research on resilience points to the importance of holding high and clear expectations for all children (Resnick, 1995; Henderson and Milstein, 1996; Dweck, 2000) which opens up the potential for all children and not only for the ones seen as clever. As previously stated, the feedback that teachers give to children in classrooms is a powerful tool from which children construct their epistemic mentalities and epistemic identities as learners (Resnick and Gall, 1997; Claxton, 2002; Black et al., 2003). We will discuss this process in more detail in the "learning through interactions" section.

Resilient children are the ones who persist despite frustration, but also the ones who find the appropriate resources or help (in themselves and/or their environment) to carry on learning (Claxton, 1999). This is what Claxton calls resourcefulness or "the tendency to look out for any utilities and resources that might support current learning"

(2002:30). These resources can be material and intellectual tools (as the ones previously mentioned), but also human or relational (that is someone who can help in solving a problem; someone who has a particular knowledge). In this sense, belonging to an enabling community can be an important feature. In a review of the literature on students' sense of belonging, Osterman (2000) concludes that "children who experience a sense of relatedness have a stronger supply of inner sources. They perceive themselves to be more competent and autonomous and have higher levels of intrinsic motivation. They have a stronger sense of identity but are also willing to conform to and adopt established norms and values." (Osterman, 2000:341). Claxton (1999) identifies the "three Rs of learning power as resilience, resourcefulness and reflectiveness"(Claxton, 1999:6).

Sylva (1992) identifies dialogues between teacher and child during the plan-do-review cycle of the High-Scope programmes as "cultural tools for mastery" (:148). Language is used to guide action and to evaluate the outcomes. Children learn to be self-critical in a supportive environment and are encouraged to develop persistence in the presence of difficulties.

Resilience is also a dynamic process varying through time and across situations (Rutter, 1990; Carr, 2001b; Cefai, 2004). Although children might predominantly display one type of disposition towards learning, Carr (2001b) in an ethnographic study of pre-school children has shown that the same children exhibit different orientations towards learning associated with different social identities displayed during different activities (screen printing and marble painting). This is an important point as it states that particular ways of thinking as well as particular ways of relating to learning are not only stable individual traits but are activated in contexts of different activities as well as different relational contexts.

In summary, some learning processes are crucial for promoting children's learning to learn. These include: promoting active engagement combined with reflection that fosters metacognitive thinking; linking action with reflection on the 'what' and 'how' of learning; mentalistic dialogues with emphasis on thinking processes and embedded across curriculum areas and learning situations; collaboration and joint problem solving with emphasis on planning, monitoring and evaluating; dialogues with emphasis on different points of view; making thinking visible and encouraging reflection through dialogues and formative assessment; engaging children in different modes of inquiry

(scientific, philosophical, moral, expressive) and introducing them to the practices and tools used in each area of knowledge; finally, creating a community where children feel valued and supported in taking risks and stretching their learning power.

3.2.4. Early childhood pedagogy and learning to learn

Classrooms are relatively enclosed learning communities where organisation is heavily dependent on the pedagogical model the teacher adopts. As Rogoff points out: "different instructional models involve different relations of learners to the information and its uses in socio-cultural activities" (Rogoff, Matusov and White, 1996:390).

Recently, there has been an increased focus on the types of communities that classrooms create. The concept of classrooms operating as communities of learning has been advocated as the social structure that best promotes learning to learn, encompassing in their practices the processes described above.

Watkins' (2005a) review of the literature on the effects of operating classrooms as learning communities gives evidence of four gains: 1) disciplined discourse becomes part of the community; 2) responsibility for and control of knowledge becomes shared; 3) conceptions of learning are richer and more constructive and 4) shared metacognition develops about the process of learning.

The term community of learning does not apply to any group of people assembled in a school or classroom with the purpose of learning. In communities of learning children and adults take decisions together, and diverse contributions are embraced (Rogoff, Matusov and White, 1996; Watkins, 2005a). In learning communities there is an emphasis on learning, learning being seen as a social process of meaning making in dialogue with others, making use of the cultural tools of our society (Bruner, 1996; Wells, 1999; Watkins, 2005a).

> I conceive of schools and pre-schools as serving a renewed function within our changing societies. This entails building school cultures that operate as mutual communities of learners, involved jointly in solving problems with all contributing to the process of educating one another. Such groups provide not only a locus for instruction, but also a focus for identity and mutual work. Let these schools be a place for the praxis (rather than the proclamation) of cultural mutuality – which means an increase in the awareness that children have of what they are doing, how they are doing it, and why (Bruner, 1996:81, 82).

Although the research studies which Watkins reviews do not concern ECE, they may suggest an inspiring possibility for ECE if, as demonstrated throughout this review, learning is considered a continuous process which starts before children enter primary school.

Sylva and Nabuco (1996) found that formal didactic pedagogical models, where learning is undertaken through formal routine activities detached from meaningful purposes, can have a negative effect on young children's learning, anxiety and self-esteem. These types of pedagogies are seen as over academic and poor in engaging the minds of young children (Katz, 1999). The emphasis on children's intellectual development when it is taken in terms of understanding and shared co-construction of meanings between children, peers and adults has been found to produce long-lasting effects on children development (Siraj-Blatchford et al., 2002; Sylva et al., 2004) and in their adjustment and positive integration in life (Weikart, 2004).

Many excellent ECE settings employing a range of curriculum models and pedagogies developed across the world have created impressive communities for young children where they learn in an active, engaged way supported by caring and stimulating adults (Siraj-Blatchford, 1999). The idea of building learning communities for young children is not new, although they are less frequently found in ECE.

If we understand the important role of ECE in empowering young children as learners and initiating successful life-long learning, this will provide a basis to study in depth pedagogical models as epistemic milieu (Claxton, 2002).

The role the teacher plays in young children's learning needs to be explored, while pedagogies which promote learning to learn need to be further researched (Siraj-Blatchford, 1999; Meade, 2000; Siraj-Blatchford et al., 2002). This is particularly important not only because of the power of the teacher in classroom learning discourses (how we learn, relationship between ability and learning), but also because of their power in structuring the social relations (collaborative, individualistic, hierarchical, negotiated) and other resources (space, time, activities, materials) in the learning context. In this way the teachers' objectives defined in terms of their pedagogical model and their practice become a strong component of the community of learning.

3.3. Learning through interactions

Language provides the means through which children construct their identity as learners, combining a cognitive with a social affective relation with the world.

According to Wells, knowledge itself is co-constructed through collaboration and communication processes between individuals, teachers, parents, members of the local community and other expert members of the wider community (Wells, 2001). He views education as a dialogical process although, as he points out, interactions are deeply interconnected with the actions and the tools (material and psychological) children and adults use in classrooms, not forgetting that at the same time they are framed by the social/institutional framework in which they operate (Wells, 1999).

3.3.1. Adults' and children's interactions

Research findings have revealed the crucial role of interactive dialogues between children and adults in promoting young children's learning (Wells, 1986; Sylva, 1992; Pramling, 1996; Siraj-Blatchford et al., 2002; Amante, 2004).

Through interaction, teachers model ways of thinking and learning and convey their views (expectations) to the learner (Brophy, 1998; Claxton, 1999); children and teachers also share and negotiate meanings by engaging in thinking together (Siraj-Blatchford et al., 2002). As children participate in social discourses they also develop theories about themselves as learners with particular learning dispositions (Carr, 1995). In fact teachers' interactions with children may be seen as critical for sustained and deep learning to occur (Pramling, 1996; Siraj-Blatchford et al., 2002).

The Researching Effective Pedagogy in the Early Years (REPEY) study (Siraj-Blatchford et al., 2002) identifies quality interactions as "sustained shared thinking", where the adult and child are both highly *involved*, in a process of co-construction through *cognitive engagement* where the adult uses *instructional* techniques such as modelling and demonstration, explanation and questioning. Sustained shared thinking interactions do not require a planned forum, they can happen wherever teachers and children get involved in joint, meaningful activities.

Some researchers suggest that in 'asymmetrical' learning interactions (such as adult-child), children tend to accept without questioning the adult point of view and subsequently have more difficulties in questioning, disagreeing, or challenging

propositions, and in actively engaging in co-constructions of meanings or intellectual inquiry (Light and Littleton, 1998). 'Asymmetrical' learning interactions happen not only between adults and children but also between peers when one is more knowledgeable and directs the other towards an end (see 3.3.2. section below).

It is important not to diminish the value of interactive situations where the child profits from the direction of a more experienced peer or adult as long as they are both involved and they share the goal of the learning that takes place. The Effective Provision of Pre-School Education (EPPE) study points to the need for balance between teacher initiated and child initiated activities (Siraj-Blatchford et al., 2003). Children's openness to the world, to new experiences and situations, as well as to different communities of practice would be compromised if they could not participate in situations which they know little about.

Work on effective teaching or pedagogy (Muijs and Reynolds, 2001; Siraj-Blatchford et al., 2002) as well as work on developing children's metacognitive and thinking skills (Pramling, 1996), show that when teachers interact to draw attention to *what* is learnt and *how* it is learnt, children not only learn better but develop a better awareness of the learning processes, thus becoming more metacognitive. Similarly, Siraj-Blatchford et al. (2002) found that in the most engaging and intellectually stimulating interactions ("sustained shared thinking") between teachers and children, both the content knowledge and the thinking process were important components. This seems to indicate that metacognitive thinking should not be exercised or practised in a vacuum but should be linked with meaningful (to the child) content knowledge learning. The REPEY study also suggests that in order for teachers to engage in interactions that encompass both the *what* (content) and the *how* (process) of learning, they should have good curriculum knowledge, in order that any sustained shared interactions are simultaneously *meaningful* (Siraj-Blatchford et al., 2002).

Early years teachers often seem to be unaware of the importance of their interactive dialogues with children in extending their learning and therefore do not use many dialogues to scaffold the child's thinking (Tizard and Hughes, 1984; Siraj-Blatchford et al., 2002). Instead, they tend to provide different materials and equipment for children to explore and, from this exploration, to develop their own thinking (Meade, 2000). This situation might come from the crude interpretation of developmental theories of Piaget and their educational use, which emphasises the child learning through acting and

inquiring about the world as a 'lone scientist' rather than through interaction with others, joint reflection and thinking (Siraj-Blatchford, 1999).

Siraj-Blatchford (2004) has been advocating for teachers to assume a more instructive role when working with young children. Her argument is based on an understanding of learning from a socio-constructivist perspective where learning is seen as an interactive co-construction process between the child, his/her peers and adults.

Two pedagogic tools which teachers use in teaching interactions were identified (for instance in the Learning How to Learn Project) as having the potential to help children learning to learn: the use of questions and feedback.

Questioning

Questions have been found to provide powerful tools for thinking (Cazden, 2001; Fisher, 2001; Siraj-Blatchford et al., 2002; Siraj-Blatchford and Manni, in press), provoking metacognitive thinking (Pramling, 1988; Cazden, 2001), critical thinking (Lipman, Sharp and Oscanyan, 1977; Davis-Seaver, 2000), speculative thinking (Siraj-Blatchford et al., 2002) and reasoning (Lipman, 1991). But not all questions are good in this respect. Good questioning has often been associated with 'open' questions, which have more than one answer, such as "What do you think?" rather than 'closed' questions with one right or wrong answer. Although closed questions can help children focus on particular relevant features of a task, it is also important to recognise that by focusing on a right or wrong answer they can promote children's performance goals rather than learning goals (Cazden, 2001). 'Good' questions provoke discussion and encourage children to question themselves, others and the world around them (Davis-Seaver, 2000; Alexander, 2004; MacNaughton and Williams, 2004). Cazden (2001) talks about process questions and 'metacognitive questions' as ones that call the learner's attention to their thinking or action and their knowledge. They help to make the *what* and the h*ow* of learning explicit and therefore thinkable. Most research on classroom questioning found that teachers overuse of closed questions (as opposed to open questions), to recall information, test knowledge, or use them as controlling moves, or rhetoric statements (Wood and Wood, 1983; Galton et al., 1999; Siraj-Blatchford and Manni, in press). Siraj-Blatchford and Manni's (in press) analysis of 5,808 questions across 400 hours of observations from the REPEY study, found that

only 5.5% were open-ended questions, 'which provided for increased encouragement (to speculate and trial and error) and/or potential for sustained, shared thinking/talking'.

Good questions are ones which make sense to children and do not make them feel embarrassed or humiliated, or that their rights are invaded, and which give them the possibility to give an answer (not necessarily one which is too complex) (Fisher, 2001; MacNaughton and Williams, 2004). The criteria for good questions are that they invite the child to think and reflect, to see things from another perspective and to explore uncertainty within a secure environment (Claxton, 1999; Fisher, 2001).

Another feature of interactive dialogues between teachers and children is how children learn to use questions themselves (engage in inquiry or a critical mode) and how questions promote extended dialogues. In this case too many adult questions can inhibit the "inquiry mind" (Wells, 1999). Tizard and Hughes' study (1984) of four year-old girls talking at home and at pre-school, found that the frequency (and quality) of teachers' questions were linked to a decrease in children's participation in dialogues as well as in the frequency of questions the children raised. Wood (1986) suggests that in order for children to contribute to interactions and express their thinking, their ideas and puzzlements, teachers should use fewer closed questions, and should also share their own views and opinions (1986:115). Too many adult questions can mean too much teacher control of the conversation and the child's withdrawal from the conversation (Wood and Wood, 1983; Tizard and Hughes, 1984). A few, but good, questions seems to be the right way.

Feedback

Assessment practices and procedures have been the focus of much research as the powerful relationship between assessment and learning has become clearer (Gipps, 2002) . A review of the research on assessment and learning (Black and Wiliam, 1998) indicates certain conditions which need to be present for assessment to have an impact on improving learning: the provision of effective feedback to pupils; the active involvement of pupils in their own learning; adjusting teaching to take into account the results of assessment; a recognition of the profound influence of assessment on the motivation and self-esteem of pupils, both of which are crucial influences on learning; and the need for pupils to be able to assess themselves and understand how to improve.

Feedback is seen as an essential feature of the pedagogical interaction, one that conveys information about explicit (overt) and implicit (covert) curriculum (Bernstein, 1975) and, the teachers' expectations of children. The nature of feedback also reveals the power relationships in learning/teaching activities, and impact on children's learning dispositions (motivation, response to failure or difficulty) and learning identities.

Dweck and colleagues (1998; 1999) studied the relationship between different types of feedback and the way children (five and six year olds) respond to failure or setbacks. They incorporated notions of evaluative and descriptive feedback with both criticism and praise. Kamins and Dweck (1999) studies used three types of criticism: 1) strategy feedback – orienting the child towards different strategies; 2) with reference to the appropriateness of specific behaviour; 3) person-oriented criticism that reflects on the child as a whole. Each of three groups of children received only one type of feedback. The group receiving person-oriented criticism showed the strongest helpless reaction of any group, whereas the group that received the strategy feedback showed the most mastery-oriented response of any group. The same authors devised a similar study to analyse the effect of different types of praise. Three groups received person-oriented feedback reflecting on the child as a whole or on the child's traits: 1) "you are a very good boy/girl 2) "I'm proud of you" or 3) "You are very good at this". A fourth group received praise that was focused on the child's outcome but not the strategy or effort ("That's the right way to do it"); the two remaining groups received praise focused on either their effort (5 "You really tried hard") or their strategy (6 "you found a good way to do it; could you think of other ways that should also work?). The results showed that the groups who received the person-oriented praise on the successful tasks were the ones who showed the most helpless pattern in the face of failure. Conversely, the groups who received the effort and strategy praise showed more mastery-oriented behaviours in the face of failure.

> Praise is a powerful tool. Not handled properly, it can be a negative force, a kind of drug that, rather than strengthening students, makes them passive and dependent on the opinion of others (Dweck, 1999:4).

Praise, when not tuned to children's real achievements or products can also discourage effort and involvement (Marzano, 1998; Claxton, 1999). Balson's (1992) distinction between praise and encouragement is helpful in clarifying differences between different types of positive feedback. In his view, praise involves the student rather than the

student's work and "gives false values to children as it indicates that they have worth only when they gain praise" (Balson, 1992:116). Encouragement, on the other hand, is an acknowledgment of effort, helping students to evaluate their own performance, and focuses on the strength of their work, thus helping students to feel confident about their own ability; it shows acceptance and respect, and it is seen as a message between equals rather than a patronising 'talking down'.

Studies point out that both positive and negative feedback can promote children's learning orientation as long as they are focused on way the child conducts a task rather than on own personal traits.

Tunstall and Gipps (1996) developed a feedback typology from their research in primary schools (key stage 1) which included four types of feedback: type A - rewarding/punishing; type B – approving /disapproving; type C – specifying attainment or improvement; and type D - constructing achievement and constructing the way forward. They argue that types C and D are the ones associated with assessment for learning in the way they promote learning orientation, while types A and B promote performance orientation.

Gipps (2002) also highlights the impact of assessment on identity formation. In her view, involving the student in the assessment process is a way for teachers to show students that they are valued and respected rather than objects of classification and labelling. Involving children in planning and assessment situations in the classroom is a way of children learning to learn while participating in the 'steering' of learning (Nunziati, 1990; Perrenoud, 1998; Poluyanov and Matiss, 1999; Watkins, 2005b). This type of formative assessment is adopted through collaboration between the novices (students) and the more experienced ones (teachers), thus sharing the power of assessment through progressive participation (Brown and Campione, 1994; Rogoff, Matusov and White, 1996; Rogoff, Turkanis and Bartlett, 2001; Gipps, 2002). The power relationship is also shaped by the amount of information each of the participants has about the processes of learning or the *transparency* of the system (Wenger, 1998). Formative assessment provides information to both the teacher and the student and has a bearing on the planning of learning goals and on the processes and activities that should follow. Planning is informed by assessment.

3.3.2. Peer interactions

Peer interactions also play an important part in children's learning. Peers are partners who engage in learning and joint activity, they imitate each other, they teach each other and they collaboratively engage in making sense of the world around them through discussion, negotiation and shared reasoning (DeVries, 1997; Azmitia, 1998).

According to DeVries (1997), the nature of peer relations (equality of status), frees the child from the authority of the adult. Thus, in order to make co-operation possible, children explore their own points of view, decentre, and engage in cognitive conflict. The child's concern to maintain relationships and success in collaborative play leads them to negotiate and co-operate, and search for equilibrium in many ways. According to Azmitia (1998) peers can influence knowledge acquisition and revision in different ways: at a motivational level by increasing others' willingness to attempt difficult tasks and reducing frustration in facing difficulties, through imitative behaviour, through peer-tutoring where both tutors and tutees gain in understanding and learn to communicate effectively and through engaging in negotiations and discussions that might result in mutually shared and potentially higher levels of understanding (Azmitia, 1998). Rohrebeck et al.'s (2003) meta-analysis of Peer Assisted Learning (PAL) with elementary school students corroborates these positive gains of peer interaction.

Yet it is not enough to engage children in joint activity if peer interactions are to have some educational value: confrontation between different points of views must occur (Perret-Clermont, 1980; Pramling, 1996; Larkin, 2006).

Mercer's studies (Mercer, 2000) have been concerned with how children use talk in collaborative activities and more specifically how they use talk to think together. His interests move away from approaches to language as a tool for individual learning and development, towards a focus on language as a tool for collective thinking and development of ways of thinking. Mainly from studies within the "Spoken Language and New Technology" (SLANT) project (Fisher, 1992; Mercer, 1994; Mercer and Wegerif, 2004) three types of talk were identified within primary school classrooms:

> Disputational talk, which is characterised by disagreement and individualised decision making. There are few attempts to pool resources or to offer constructive criticism of suggestions. Disputational talk also has some characteristic discourse features - short exchanges consisting of assertions and challenges or counter-assertions.

> Cumulative talk, in which speakers built positively but uncritically on what the other said. Partners use talk to construct a common knowledge by accumulation. Cumulative discourse is characterised by repetitions, confirmations and elaborations.
>
> Exploratory talk, in which partners engage critically but constructively with each other's ideas. Statements and suggestions are offered for joint considerations. These may be challenged and counter-challenged, but challenges are justified and alternative hypotheses are offered. Compared with the other two types in exploratory talk knowledge is made more publicly accountable and reasoning is more visible in the talk (Mercer and Wegerif, 2004:72).

Both cumulative talk and exploratory talk permit children to collaborate in groups and reach a common goal, using language to think together (Mercer and Wegerif, 2004). The interest in exploratory talk is that it is a mode in which children experience critical thinking and collaboration in order to co-construct knowledge. Contrary to disputational talk, where participants seek control over each other, in exploratory talk the control (power) is shared and negotiated. The use of exploratory talk involves critical involvement between the participants. Discussion centres on ideas and not on 'being right' or 'getting it right'. According to Mercer and Wegerif, exploratory talk is "a way of using language which is not only the embodiment of critical thinking, but which is also essential for successful participation in 'educated' communities of discourse (such as those associated with the practice of law, science, technology, the arts, business administration and politics)"(2004:74).

Unsurprisingly, several studies have shown that this type of talk does not occur often in young children's classrooms. Yet studies from a socio-cultural perspective have pointed out the importance of some contextual features such as friendship, sense of community, the established ground rules of learning and the nature of tasks and materials in promoting explorative talk (Crook, 1998; Amante, 2004; Mercer and Wegerif, 2004). Primary school teachers (Mercer, 2000) as well as pre-school teachers (Amante, 2004) can play an important role in promoting exploratory talk, in supporting sustained interactions between children and modelling cumulative and exploratory talk. Mercer found that teachers become more effective by treating learning as a social communicative process, "organizing interchanges of ideas and mutual support among students, encouraging students to take a more active, vocal role in classroom events, explicitly relating current activity to past experience and using students' contributions as a resource for building the 'common knowledge' of the class."(2000:160). Amante

found that pre-school teachers have an important role in supporting children's joint problem-solving in tasks that they could not solve alone by using scaffolding, and also in mediating children's interactions by managing emergent conflicts, promoting the participation of all children in the activities and encouraging collaboration between children (Amante, 2004:445). Wood and Wood (1983) found that pre-school children could expand and extend each others thinking and conversation particularly in situations when the teacher did not exert too much control.

3.3.3. Whole-group interactions

In ECE classrooms, a good amount of language-focused activity occurs in whole-group situations where the teacher and the group sit together during "circle time", "sharing time", "classroom meetings" or other similar activities. Studying whole-group situations is particularly relevant in this study, as they are considered essential in promoting the aims of the MEM model and constitute a significant part of the daily classroom routine.

Research often associates whole-group situations with poor adult-child interactions. Teachers often dominate the interaction, mainly through the use of closed or inappropriate (pseudo) questions; here the teacher often decides on the content of the talk and when (and which) children can talk (Kantor, 1988; Reich, 1994). Some studies on 'circle time' and other whole-group activities reveal cases of routine patterns of interaction with children's poor intellectual engagement and highly dominant adults producing a 'dry' interactive structure based on IRE – teacher Initiation, child Response, teacher Evaluation (Cazden, 2001).

The REPEY study (Siraj-Blatchford et al., 2002) also stresses the relationship between whole-group activities and poor teacher-children interactions. When analysing the cognitive and monitoring interactions in each of the social groupings, it was in 1:1 or 1:2 groups that the great proportion of 'sustained shared thinking' emerged. Despite that sustained shared thinking was rarely observed (6% for whole class, 11% for small group, 12% for pairs and 15% for 1:1) the whole-group interactions had half of the amount of sustained shared thinking observed in other groupings. The argument that whole-group interactions are poor, is reinforced by analysis of the quality of social pedagogical interaction across social groupings: in whole class groups, behaviour management accounts for 55% of the interaction, compared with 35% in small groups

and 17% in pairs. However the analysis does not explore how different whole-group activities are linked to different interactive qualities.

Although it is helpful to keep in mind that the potential for sustained dialogue might be reduced in big groups, it is also important to consider the role of whole-group activities in other functional aspects.

Whole-group activities can be for many different purposes and entail varied functions such as group cohesion, learning by rote, transmission of cultural patrimony (stories, songs). They can create a forum for group discussion and decision making where different views are expressed and considered and new meanings are constructed, building a cooperative community where responsibility for each other's learning and development is shared.

Whole-group activities play an important role in introducing children to a varied school discourse repertoire (Kantor et al., 1992). Kantor and her colleagues (1992) studied 'circle time' using socio-linguistic analysis and ethnography to understand the dynamic use of language. Results from one of these studies show how three and four year-old children learned to be conversationally appropriate partners within a group setting. Children became more actively involved in the conversation and the teacher assumed a less dominant role. Over time, children participated more in terms of interaction turns and also in the introduction of topics. No analysis was undertaken of the quality and content of the interactions and there were also no references to individual participation patterns. The study suggests that 'circle time' was effective in promoting children's increasing participation in classroom discourse and, in this sense, children's views of learning were constructed around a participatory rather than a teacher-controlled endeavour. Kantor's (1988) comparison of 'circle time' in two classrooms' (a preschool and a combined kindergarten-first grade) shows how two apparently similar activities construct very distinct meanings about the purposes of school, the teachers' and students' roles and the rules for interaction. The pre-school circle time agenda was learning about group language by using language, while in the kindergarten circle time the agenda was organisation, teaching and sharing accomplished through certain tasks (making up a calendar; checking who was absent) and whole-group instruction. Although there was time allocated to sharing ideas, this was done by individual children gaining the floor and telling the group about personal things, and the teacher's positive evaluation. Only after the teacher evaluation would the group vocalise appreciative

utterances but no group conversation occurred. The teacher's role in pre-school was one of "participant–facilitator", while in the kindergarten the teacher was more of a "leader-instructor-manager" (Kantor, 1988:32). These ethnographic studies show how children come to learn about the roles associated with "teacher" and "student" through the everyday interactive events of school.

In a comparative study of primary classrooms in five countries (Alexander, 2000) transcriptions of classrooms dialogues revealed that the organisational component (whole-group, small group, individual) was not enough to determine the type of interaction and pedagogy and learning that was promoted: "it is the character of talk as talk rather than its organisational framing which determines the kind of learning to which it leads" (Alexander, 2000:558).

Reich's (1994) research on 'circle time' in Sweden associates the structure of these classroom events with teachers' views of its purpose. For them, 'circle time' has three functions: 1) providing structure, order and a break during the working day; 2) legitimising the professional role of the teacher in front of all; 3) providing a feeling of togetherness. To children, 'circle times' could represent "affirmatory meetings, but also a restraint where discipline and coercion are prevalent" (:57). In other studies, however, teachers view 'circle time' as an essential activity for building a community that is caring, supportive, inclusive and that fosters group identity (Donoahue, 2001; Vasconcelos and Walsh, 2001), or as a community that challenges the individual to consider different perspectives, with the children being given a voice, and participating in decision making (Davis, 2001). Teachers' interpretation of the purpose of circle time activities might impact on the social structure (rules, roles) of the activity, and on the type of interaction in which children and adults engage; differences in the processes (social, cognitive) and also on the content of interactions are likely to provide different learning opportunities for the children. However, teachers' perspectives and intentions are not always translated into practices (Bennett, Wood and Rogers, 1996). Sometimes, the meaning created through dialogue in whole-group activities contradicts the intentions of the educational project and the classroom ethos (Housego and Burns, 1994; Harris and Fuqua, 2000). Housego's and Burns' arguments are based upon their experience as teacher educators visiting many schools and observing different 'circle times'. They state that some so-called egalitarian rule – giving the floor to every child – actually lead to superficial and short interactions. They often observed that teachers

would not offer a comment, challenge or question a child's utterance as a way of showing that all contributions were of the same value and therefore should be 'respected'.

Studies reveal that some whole-group activities actually result in more participation and dialogue by the children engaging in thinking and reflection than others (Gallas, 1992; Danielewicz, Rogers and Noblit, 1996; Cazden, 2001; Poveda, 2001). When children are invited to discuss real problems they become more involved (Poveda, 2001); the same happens when teachers allow child participation but retain a management role (Gallas, 1992; Gallas et al., 1996).

Ethnographic studies have also illustrated the co-construction of meanings (Hong and Walsh, 1996), discussions about prejudice and inclusion (Paley, 1992), discussions about moral or philosophical issues, establishing sensible rules (Mercer, 2000), and children supporting each other to evaluate learning and discussing learning criteria (Alsafi, 1994). Although children participate actively and take some control over these processes, the role of the teachers is still crucial in establishing the context structure and norms (Alsafi, 1994).

Vasconcelos' (2001) study of a nursery teacher in Portugal provides an interesting account of how a teacher used whole-group activities (with 20 three to five year-olds) to build a community identity. Membership (belonging, having a place in the group), awareness (becoming conscious of feelings and thinking, discussing real problems), negotiation (problem solving through dialogue and negotiation of solutions, interdependence and social responsibility), ritual (cultural activities such as music, dance and eating) and group memory (linking past and future events, collective remembering, recording experiences, documenting, collecting things), were themes explored in whole-group conversations and activities that helped to create the community of this classroom of three and four years old children.

Action-research projects, conducted as part of the "Developing Inquiring Communities in Education Project" (DICEP) led by Wells in the USA, have been reporting the importance of all-group meetings in creating a community of inquiry with elementary school children (Davis, 2001; Donoahue, 2001). Davis explored how classroom meetings were contributing towards building common knowledge and shared meanings,

promoting the use of language (rather than actions) to solve problems and to construct knowledge together through metacognitive awareness (Davis, 2001).

It is important to note that some of these studies followed highly competent teachers and are not based on mainstream teachers' abilities to conduct effective group time. Whilst they are an inspiring source of knowledge for the development of a teaching proficiency, it is also important to acknowledge that, because these interactive situations are highly dependent on the nature of the activities and the roles of the participants and their power relationships, they are highly demanding, requiring from the teacher a great and purposeful effort.

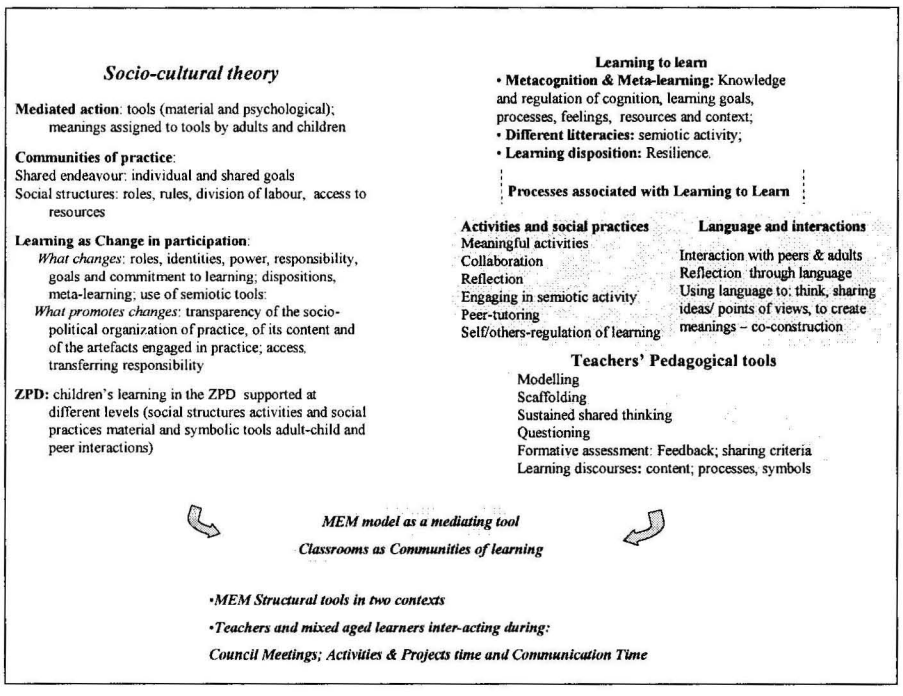
Chapter 4 The study

This chapter starts by setting up the theoretical and analytical framework used to study the MEM pedagogical model in practice, l inking this framework with the specific research aims and questions. It then considers epistemological and methodological issues in studying pedagogy, and presents this study's paradigm and methodology. The last section presents the research design, methods of data collection and analysis.

4.1. Theoretical and analytical framework

The theoretical framework of this study combines a socio-cultural theory of learning with the literature on learning to learn and the contribution of interactions in the teaching/learning process. As previously suggested, the MEM model draws heavily upon the socio-cultural theories of Vygotsky. It is therefore especially appropriate to draw upon neo-Vygotskian theoretical models in investigating the MEM pedagogy as a mediating tool in classrooms understood as communities of learning. This theoretical background provides a means of analysis which focuses on the social processes of teaching/learning mediated by cultural tools (applications of the MEM model) within two classrooms (Figure. 4.1.).

Figure 4.1. Theoretical and Analytical framework



Pedagogical models such as the MEM model are cultural tools which include "theoretical premises, administrative policies, and instructional procedures presumed valid for achieving preferential educational outcomes" (Evans, 1982:107) and are re-constructed in classroom practices by teachers and children in their everyday joint activity within institutional and social contexts (Wertsch, 1998; Alexander, 2000).

Research aims

The general aim of this research is to study the practice of the MEM pedagogical model in two pre-school classrooms in Portugal, looking particularly at how this model mediates (affords or constrains) young children learning to learn.

Research questions

1. What are the key features of the MEM model observed in two different contexts? To what extent do the observed practices reflect the MEM ideals?

- How is learning organized in the two classrooms? What are the activities, interactions and tools that mediate the teaching/learning process? What are the roles of the participants (teachers, children, other adults)?

- How do teachers conceptualise the learning process, the roles of the participants, and the organisation of the learning context?

- How do children perceive/understand their learning environment, the purposes and the processes of learning the rules, and the roles of the different participants?

2. How does the MEM pedagogy as practised in the two classrooms enhance or constrain children's learning to learn?

- In what respect does the MEM pedagogy (as investigated in the two classrooms) promote processes associated with children's learning to learn?

- How do the children perceive themselves as learners and participants in the learning process?

- How do children move towards a full participation in the MEM classroom? Which factors constrain or support greater participation?

In order to answer the first question, the organisation of the two learning environments will be described and the meanings that each classroom community attribute to the tools they use in their everyday practice will be investigated. Also considered are the institutional organisations and the larger societal contexts in which classrooms operate.

Drawing from literature on communities of practice, individual and shared goals in the two classrooms will be investigated, as well as the communities' social structures: roles, rules, division of labour, and access to resources (Lave and Wenger, 1991).

The second question of the study addresses the effectiveness of the MEM model in mediating children's learning to learn.

The two classroom communities were investigated as *communities of learners*, understanding learning as a 'shared enterprise'. Drawing on the participation model and social practice theory (Lave and Wenger, 1991; Rogoff, 1995; 1998) learning is conceptualised as change in participation in social practices, from a peripheral participation towards full participation in the classroom community.

The concern of this study with learning to learn directs a particular focus to children's change in participation in the *processes* associated in the literature with metalearning, participatory appropriation of different literacies and the development of positive learning dispositions.

An in-depth analysis of the inter-action processes – what participants do and how they interact – will focus on three components (times) of the MEM pedagogy and associated tools, which are hypothesised to make a particular contribution to the components of effective learning: Council Meetings, Activities and Projects time and Communication Time.

These components are particularly concerned with the use of language, communication and interactions with others to extend individual learning, through reflection and self-regulation processes, and with the idea of creating a community of learning where everybody shares responsibility and is involved with each other in learning. They also present quite complex challenges in terms of their use with young children. Pre-school children are only just beginning to make use of language to think, to engage with each other's thinking and ideas, to cooperate and to become purposeful learners. For these processes to occur, children must have an appropriate context and support, particularly

from their teacher. A close investigation of these components will shed light on how learning to learn can be promoted in pre-school classrooms.

In order to account for children's change in participation, the study will focus on changes in roles, identities, power, responsibility, goals and commitment to learning. The focus on how the MEM pedagogy in practice promotes or constrains children's learning to learn requires us to account for children's 'change in participation' also in metalearning processes, the use of semiotic tools and learning dispositions. Such change will be observed during the nine month period of fieldwork and be informed by the analysis of different age children participating in the ongoing practices of each community. Some key factors will be looked at in particular: transparency of the socio-political organisation of practice, of its content and of the artefacts engaged in practice; access, transferring responsibility (Lave and Wenger, 1991; Rogoff, 1998).

The concept of ZPD was used at different levels:

1) The MEM structural tools in context: institutional context, classroom organisation.
2) Teachers and mixed age children interacting: activities and social practices, material and symbolic tools and adult-child and peer interactions.

4.2. Studying pedagogy: epistemological issues

Methodological approaches to the study of pedagogy and pedagogical models differ in considerable ways due to ontological and epistemological stances as well as to the kind of questions a study aims to answer. Ontology refers to considerations about the nature of the phenomenon, which is studied: in this study, the MEM pedagogy in practice and children's learning to learn. Epistemology is the consideration of knowing: what is seen as valid knowledge and how do we go about knowing (Denzin and Lincoln, 2000). It considers the methods used by the researcher when approaching reality that may be defined within a research paradigm (Hughes, 2001).

Alexander (2000) points out that "for systematic studies of teaching the presage-context-process-product continuum remains the conceptual frame within which choices of method and focus are made" (Alexander, 2000:270). 'Presage' refers here to the intentions of a pedagogy, 'context' to the socio-cultural milieu in which it is embedded, 'process' to how it is transformed into actions in the classroom and finally 'product' to the outcomes in terms of children's learning.

Most studies of pedagogical models in ECE have been concerned with the link between children's experiences of a particular model (the process) and their immediate or long-term learning and development (the products or the impact) (Nabuco, 1997; Schweinhart and Weikart, 1997). Such studies, being largely quantitative tend to establish causal relationships between some isolated variables of the models and some measurable outcome in terms of children's knowledge or development. Their main aim has been to compare the effectiveness of different pedagogies expressed in results of children's learning and development. According to Alexander (2000), in applying statistical analyses these studies apply a fragmented view of pedagogy:

> Researchers have become adept at dissecting teaching but poor at reconstructing it. They are now able to isolate certain process factors which correlate with tested learning gains... They are rather less successful in demonstrating how these and other elements are reconstituted by teachers and children as coherent and successful learning encounters with a beginning a middle and an end (Alexander, 2000:271).

These studies may highlight some structural characteristics of educational settings (e.g. the level of staff training, adult/child ratios or some categorised practices) but are limited in providing an understanding of the processes generated by children and adults acting and co-constructing knowledge and meaning in the pedagogical context they share, therefore neglecting the contribution of presage-context to the processes. These evaluation studies are important in linking pedagogical models with outcomes but they tend to be less powerful in shedding light on and explaining the processes that might account for these results. For example, Nabuco (Sylva and Nabuco, 1996; Nabuco, 1997; 2004) studied the impact of three pedagogical models practiced in Portuguese settings (João de Deus, High-scope and MEM) on children's progress (outcomes) in the first year of primary school. The conclusions of this quantitative study (involving 15 nursery-schools and 180 five year-olds followed into their first year of primary school) set up links between process variables and outcomes measured by standardised instruments. Yet when the study attempts to explain these links, it is left only with hypothetical statements that are not grounded on a sufficiently detailed account of the processes generated within each pedagogical model. These types of studies are modest in considering the socio-cultural context in which teaching and learning operate. For instance, they use standardised measures of quality (for example the ECERS rating scale) and descriptors of processes (types of activities, choice) that often fail to account

for the values and theories that underlie each pedagogical culture, their intended aims and the context in which they are studied. In one publiched outcome of this research, for instance, the MEM model is described as a free play curriculum based on Froebelian principles (Sylva and Nabuco, 1996), revealing a poor understanding of the theoretical and philosophical background of the model.

These studies have been valuable in validating pedagogical models (through comparative analyses of different models), as a whole, as well as on what concerns specific dimensions (for example formal teaching versus informal or dialogic). However, such work does not include the deep study of these models in practice necessary to shed light on the processes they generate, and contribute to their development. Thus, there is a need to adopt a research paradigm able to grasp elements of the culture in which pedagogical models operate, while at the same time exploring how the ongoing learning and teaching processes are re-constructed by children and teachers in a given model.

For example, the interpretative paradigm offers methodological approaches that have proved able to grasp and understand the complex processes of learning and teaching and the development of learning identities and dispositions in particular pedagogical contexts (Pollard and Filer, 1996; Carr, 2001b; Brooker, 2002; Siraj-Blatchford et al., 2002).

In terms of studying the role of pedagogy in children's learning, the REPEY study (Siraj-Blatchford et al., 2002) is of interest and particularly so as the report of the 12 case studies of ECE settings (Siraj-Blatchford et al., 2003), which was part of the large sample followed by the Effective Provision of Preschool Education (EPPE) project (a large-scale longitudinal study which focussed on the link between pedagogical processes and children's outcomes). The 12 case studies were identified as providing good to excellent practice. The qualitative (and some quantitative, e.g. child systematic observations) research applied to these in-depth case-studies made it possible to identify the characteristics of effective pedagogy which supported (and explained) the development of skills, knowledge and attitudes that enabled children to make a good start at school (Siraj-Blatchford et al., 2002:16). These case studies included interviews with the managers, staff and parents, detailed observations of staff, systematic observations of different learning-teaching situations across different activities and social grouping with a particular attention to interactions between adults and children,

and detailed descriptions of the pedagogical framing, which included planning, assessment, resources and arrangement of space, and the establishment of daily routines. These comprehensive data sets were applied to identify a number of characteristics of effective pedagogy (context-process) linked with product outcomes.

Some aspects of the methodology, especially related to views of learning and pedagogy, require further reflection. For example, the length of time used to collect data in each case: a two weeks period in each setting provided an immense amount of data on children's learning experiences and the teachers' pedagogy, but it did not give an account of the day-to-day building up of learning in interaction with the pedagogy, nor to progress throughout a sustained period of time. This is in spite of the study pointing out that researchers who conducted the fieldwork had visited the centre to collect child and centre level data over two years (some 20-35 visits) before the case studies began. Pedagogic strategies were accounted for by a snapshot in time, while learning was assessed through output measures, making it impossible to unveil the ongoing interplay process between one and the other.

Ethnographic case studies such as the work of Lubeck (1985), Vasconcelos (1995) and Brooker (2002) have provided more detailed accounts about the social construction of pedagogical cultures in classrooms and their relationship with the cultural background of the teachers and children. In these studies, the set of values that teachers hold, their theories of learning and development and their cultural practices are multi-constitutive and give rise to different classroom communities with a particular learning emphasis, which create different opportunities for children to learn. These studies, mainly single case-studies, offer a strong focus on the presage-context-process, as they specifically question the cultures of learning and pedagogy constructed in particular ECE settings. Brooker's study goes even further, complementing the detailed study of the pedagogies that a group of 16 children from different cultural backgrounds experience at school and at home with an evaluation of children's learning. She combines a close examination (using systematic and naturalistic observational methods) of their participation in the classroom community (seeing learning as participation) through a period of one year, with the use of standardised assessment (learning as acquisition).

The next section will present the interpretative paradigm, adopted in this study, and makes the case for in-depth case-study approach to respond to this study questions.

4.2.1. Research paradigm - Interpretivism

Interpretivists see the world not as an objective reality 'out there' to be researched but as a world of many interpretations where people actively make sense of their circumstances by attributing meanings, and that these meanings and subjective views of the world influence their behaviour (Schwandt, 2000; Hughes, 2001).

Interpretive research sees the interchange between pedagogy and learning as a negotiation of meanings, constructs and ideas by participants and views the reality they produce as a combination of such negotiation of meanings in a socio-cultural and institutional context. In social action, individuals constantly "negotiate with others the meanings of our own actions and circumstances, of their actions and circumstances, and of social and cultural institutions and products (Hughes, 2001:36).

The present study considered that an inquiry into this complex process required a methodology able to combine sensitivity towards the meaningful actions of teachers and children in their classroom (emic view) with a focused inquiry informed by the theoretical background (etic view). The methodological options taken, therefore, were for depth rather than breadth (sample), using an in-depth case-study approach with some ethnographic elements.

4.2.2. An in-depth case study approach with ethnographic elements

The term case studies is usually referred to as an alternative to experimental and large survey inquiry strategies (Hammersley, Gomm and Foster, 2000). This approach studies naturally occurring phenomena bounded (usually) in what can be defined as a case (individual child/person, institution, classroom, a group of people, among others). Cases are usually "integrated systems" (Stake, 2000a:436) and case-studies provide a detailed snapshot of a system in action (Edwards, 2001a).

Yin defines case-study thus:

> Empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.
>
> Copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result,
>
> Relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result

> Benefits from the prior development of theoretical propositions to guide data collection and analysis (Yin, 2003:13).

Ethnography and case-study strategies are often combined (Yin, 2003). They share some characteristics such as researching phenomena in real-contexts, relying on different data sources and adopting a flexible design, sensitive to the demands of the "living contexts", and being directed by some preliminary or ongoing analysis. Although they can also differ in the intentions of the inquiry, the use of theory and the type of research design.

Ethnographic research has its origins in the work of anthropologists in the 19th century, who studied 'exotic' cultures and moved into accounts of "some aspect of the socio-cultural understandings and practices of a group of people" (Siraj-Blatchford and Siraj-Blatchford, 2001:193) in common sites of our society (hospitals, streets, schools). The most distinct characteristic of ethnography is a socio-cultural interpretation of the data (Spradley, 1980; Wolcott, 1987; Merriam, 1988).

Clearly, in the case of MEM pedagogy there is a culture, a common body of knowledge, values, practices and tools that have been created through the communal practices of a group of teachers. Classrooms (teachers and children) construct specific cultures as they negotiate meaning within their institutional context, and within the community to which they belong. These cultures also have a particular understanding about what education should be about and they carry out practices which are embedded in their belief systems and their traditions. In order to capture this complexity this study has an "ethnographic intent" (Wolcott, 1987).

Ethnographies, unlike case studies, do not usually use prior theoretical propositions to guide data collection. In ethnographic studies theory emerges from data (often as 'grounded theory' (Strauss and Corbin, 1998) whereas in case-studies the research design often benefits from some theoretical propositions (Yin, 2003). This distinction is vividly present in the way the researcher enters the field, either totally open to discover any emerging regularities or consistencies, or starting with a particular focus and a frame of mind based on theoretical information. Although an open mind and a responsive attitude (Edwards, 2001a) allowing questions and problems to emerge and to direct to some extent our inquiry through an "emic" perspective is considered important, this study uses the analytical lenses of socio-cultural theory as well as a body of research on effective learning processes to guide the inquiry into how the MEM

pedagogical model operates in practice and mediates (affords or constrains) children's learning to learn. This theoretical body of knowledge informs the design of the study and the methodological strategies adopted and brings an "etic" perspective in theory building. In this sense this study is not a 'pure' ethnography.

4.2.3. Familiarity

Interpretative research aims essentially to reach the invisible through the visible through a process of thick description (Geertz, 1973), which provides an account of what happens in the research site, including the perspectives both of participants and the researcher. It implies that the researcher engages in two contradictory processes. Firstly, becoming familiar with the participants and contexts in order to understand subtle differences in meaning in apparently equal behaviours; secondly, and conversely, "making the familiar strange" is necessary to notice the otherwise unnoticed and to build theory that goes below the surface. The problem of familiarity is highlighted by Delamont and Atkinson (1995) referring to educational research where researchers might be too familiar with the classroom environments they study and might therefore be unable to notice relevant features and to ask questions that go beyond already common knowledge. Familiarity is an issue in this study not only because of my background (Appendix 1 'Researcher's professional biography') as a former nursery teacher but also as a member of the MEM movement. One way in which I have endeavoured to ensure that I question and reflect upon my preconceived assumptions and views on the MEM model has been to choose an academic environment (IoE) and research forums (conferences, research meetings) that are unfamiliar to the MEM and the Portuguese context, where dialogues could help to consider different points of views and interpretations of the data (Aubrey et al., 2000). A reflexive account is provided throughout the theoretical discussion, data presentation and analysis, and a clear statement of assumptions and values has been included in the introduction. On the other hand, the extensive familiarity with the MEM model not only permits engaging in a deeper exploration and analysis of the issues beyond the surface but has also enabled gaining access to the teachers and classrooms and building a good rapport with them.

4.3. Research design and methods of inquiry

The present work uses a multiple case-study design with case-studies of two MEM classrooms, intensively studied over a period of nine months. Multiple cases "can offer

the researcher a deeper understanding of processes and outcomes of cases, the chance to test (not just develop) hypotheses, and a good picture of locally grounded causality" (Miles and Huberman, 1994:26). Opting for two cases rather than three or more was a decision grounded on the prioritisation of depth rather than breadth. This was also a pragmatic decision based on the research conditions and resources available for this study (Yin, 2003) avoiding the temptation of designing a study that a single researcher could not undertake with rigour. The methodological approach adopted in the study required long periods of time in each classroom to get to 'see' what is not immediately evident.

4.3.1. Bounding the case

Classrooms are learning communities, relatively independent of other communities, where children learn at different times of their lives. They are also the sites where the principles outlined in a pedagogical model, "the ideal representation" (Evans, 1982:107), turn into practice and can be experienced and realised. A pedagogical model may be considered an emergent epistemology rooted in praxis and constantly reflected and reinvented by its subjects (Peças, 2002). It is the praxis of the MEM 'ideal' model reinvented by its subjects in two classrooms that constitute our main 'units of analysis' (Miles and Huberman, 1994).

Units of analysis:

At the foreground of the study and the main unit of analysis is *the MEM pedagogical model in practice*. It includes the activities in the classroom, the interactions involving children, teachers, and other significant adults; the use of tools; classroom organisation of space and materials; time organisation, planning and assessment practices and work with parents and community. This unit of analysis is located at the interpersonal plane of analysis (Rogoff, 1998). Teachers' perspectives on learning and pedagogy are included and will enable understanding their intentions and the rationale behind their practices and the classroom learning processes. Additionally, the children's perspectives will provide an understanding of how children perceive and understand the learning environment, its organisation, activities and tools, and how they perceive what is to be learnt and how to go about it. The participants' perspectives will increase the understanding of the different foci of study and validate through triangulation (different

perspectives) the researcher's account of the pedagogy and learning processes observed in the two classrooms.

In the background of the study is the *weaving context of the MEM model in practice* in both classrooms. This unit of analysis is located in Rogoff's community/institutional plane of analysis acknowledging the set of values, goals, history, and institutional organisation distributed across classroom, school, local and national community.

4.3.2. Sampling cases

Teachers / Classrooms

A sampling strategy was applied both at the teachers' and at the settings' levels. Contacts with the MEM movement were undertaken in order to find teachers who were recognised by this community as MEM teachers. A first selection focused on teachers who could be identified as 'old timers' and full participants within MEM (actively involved in the movement's life either on regional boards or in training other teachers) and therefore ensuring some degree of confidence in their understanding of the MEM model. Other conditions for selection were: their use of all the components of the MEM approach such as routines and piloting tools; having a mixed age group and a group size that would represent the mainstream reality (some rural nurseries operate with groups of 6-10 children); finally and most importantly, their own and their institution's agreement to participate in the study. All these selection criteria resulted in the identification of two "typical" (Schofield, 2002) MEM teachers. The multiple case design uses a replication logic at the teachers' level, intended to increase the validity of the study (Schofield, 2002) with some elements of a sampling logic (Yin, 2003) at the case context level (see Table 4.1. below). Both teachers share a similar professional development level, being considered mature professionals (Katz, 1977), with the same academic level (3+2 years of training).

The sampling strategy at the setting level focused on the two most representative types of ECE provision in Portugal – ME nursery classrooms (51%) and IPSS day-care centres (30.6%). Despite many governmental initiatives towards the merging of these two systems, they have different histories and organisational principles, and remain two different institutional cultures of ECE in Portugal (Vasconcelos et al., 2003). The choice of one setting from each type was made to ensure a variety of contexts in which to observe the MEM pedagogy operating, and not in order to make claims associated with

the general characteristics of each type of setting. Observation of the two settings would help with understanding the interplay between the pedagogical model, the "art" of individual nursery teacher practice, and the contextual characteristics of the institutional settings, thus increasing the validity of the account of the MEM pedagogical model (Yin, 2003). The main focus of the study is on practice, using cases to illustrate, rather than to compare (Edwards, 2001a).

Two stages of implementation of the MEM model were sampled. In one setting the teacher took over a group of children facing the MEM for the first time, in the other the teacher was in charge of the same class for the second year in a row in a school that has used this model for 10 years. Choosing two different stages was considered to be helpful in providing the potential for a richer understanding of the MEM model through its implementation at different times: initial and ongoing.

Table 4.1. Sampled cases characteristics

Case names School / Teacher	Magnólia / Patrícia	Amoreira / Carolina
Teacher Profile	10-15 years professional experience 3+2 years teacher training 10+ years in MEM Active members of the MEM movement (recognized by the MEM community, members of regional boards, initial experience in training teachers in the MEM approach) Working with mixed age groups	
	Working experience in the private (non-profit) social services sector	Working experience mainly in the educational sector
Levels of implementation of MEM model	Ongoing implementation of MEM model, adopted 10 years ago by the school	First year of implementation of MEM model in that particular school.
Types of schools ID	IPSS	ME
Characteristics	Day centre caters for children aged 4 months to 6 years old. Seven classrooms.	Nursery school attached to a Primary school. One classroom
Environment	Urban	Rural / industrial

Within case sampling

An explicit sampling frame of dimensions was developed (Miles and Huberman, 1994:29), grounded on the research questions and the theoretical and analytical framework (section 4.1 above). Observations of the teacher and children throughout the different activities that are part of the MEM routine were sampled and planned in order

to have a representative body of data from each classroom throughout the year (see below in 'methods of data collection'). The use of upfront theoretical sampling (Miles and Huberman, 1994) directed the investigation towards specific aspects of the model such as whole-group interactions in Council Meetings and Communication Time, individual or small group Activities & Projects, and the use of the Piloting tools (see Appendix 3 'Types/amount of data & schedule'). Additionally, as the fieldwork evolved in each classroom, different foci on observation, documents and artefacts were sampled in an "iterative" way (Miles and Huberman, 1994). Accordingly, interviews were conducted with different adults in each school, different documents were analysed, and observations of children's activities also differed according to their relevance to each individual case.

4.3.3. Methods of data collection

Participant observation / focused observations

The study used both participant observation and focused observations. Participant observation at the *institutional level* permitted an involvement with the everyday life of each setting and collection of information about the management structure and interactions, the resources of the setting, the ethos and the relational atmosphere. Participation (as observer) in staff meetings and parent meetings were important for understanding each setting's culture.

At the *classroom level,* participant observation allowed the researcher to become immersed in the context and natural flow of classroom activities. Spradley (1980) differentiates different levels of participation: from passive participation, passing through moderate and active participation towards complete participation (Spradley, 1980:58). In this case a moderate participatory position was adopted in order to become part of the classroom environment while aiming at low interference in the pedagogy. The role of the researcher was clear for both the adults (teacher, other staff, parents) and the children who saw me as an adult friend who was working in the classroom in order to see what children do and how they learn. This role permitted some variation in participation. Field notes provided data on the organisation of the learning context (spatial arrangements, time routines, planning and assessment) and on the activities (actions, interactions and use of tools). Photographs of children's products and piloting tools complemented the field notes.

Careful planning of focused observations (and consistent recording of data collection) was undertake to ensure that data could be used to study the different components of the MEM practice and children's transformation of participation throughout the year. Focused observations throughout the year also provided data for a deep analysis of particular components of the MEM pedagogical model and the learning processes in each classroom. One focus was on the interactions between teachers and children within the context of different activities, providing access to the types of learning children engage in the classrooms (the themes, processes). It allowed for accessing the classroom culture, what was valued, and the social structure (rules, roles, issues of power, control, and participation in teaching and learning), which form the basis of each community of learning (Alexander, 2000:432) setting up possibilities for change in participation (Lave and Wenger, 1991). Data from focused observations were combined with field notes, audio and videotaping, and photographs. A systematic video recording of Council Meetings and Communication Time throughout the year was undertaken for an in-depth analysis of the interactions between the teacher and the group of children at a level that would be very difficult to achieve using only field notes. Although video recordings can provide rich data for analysis, video images only show part of what happens in the real world. They were therefore complemented with field notes and photographs providing other contextual information (for example materials, children's productions, adults coming into the classroom out of camera shot). Field notes also included some preliminary interpretations of events, useful for later analysis. The positioning of the video camera took into account the need to avoid intruding too much and thereby influencing the classroom interactions, while still ensuring the best sound and picture quality. Placing the camera away from the researcher helped to decrease children's awareness of the camera (Ting, 1998).

Six children of different ages and gender from each classroom were observed systematically throughout the year, during the "Activities & Projects" time, in order to ensure collection of data from different age-groups, disciplining the observations (see Appendix 23 'Focus children's age and gender'). Other children's observations undertaken during fieldwork will also be included in the analysis. The planning schedule also included focused observations of the teacher during this period throughout the year.

Interviews

Interviews with both adults and children complemented and extended observations by uncovering the meaning of actions for the participants, in terms of their views and intentions (Cohen, Manion and Morrison, 2000).

To make best use of time, semi-structured interviews focussed on themes (Cohen, Manion and Morrison, 2000; Cannold, 2001) focusing on relevant data to the research questions were used. However, flexibility and sensitive responsiveness on the part of the researcher to the general conversational flow and direction allowed respondents to highlight the topics most significant to them and to follow their own line of thought (rather than the researcher's) (Robson, 2001). Four formal semi-structured interviews (see Appendix 3 'Teachers' interview schedules') and several informal short interviews with both teachers took place through the year (Table 4.2.).

The first two interviews (#1, #2) were undertaken at the beginning of the academic year, after two weeks of fieldwork; they focused on the organisation of the learning environment (space and materials; time routine) as well as on the organisation of learning experiences (planning and assessment; work with parents and community). Instead of being asked directly about their views, at the beginning of the year, - which could be threatening and give rise to defensive attitudes (Yin, 2003:90) – teachers were asked to describe the organisational features of their pedagogy and clarify the rationale behind it. These interviews shed light on the interplay between their educational theories or 'what is desired' and what they perceived as some of the institutional constraints (rules, resources,) or 'what was possible in this context'. Teachers' capacity for deliberative agency is bounded by what Edwards calls "possibilities for action available to them" (Edwards, 2001b:162); Edwards, 2004a).

The third interview (#3 - November) explored the teachers' professional history and involvement with the MEM movement. The aim was to understand the multiple influences on their professional development and particularly the role of MEM in the development of their professional identity. This understanding helped the analysis and the interpretation of their practices.

The last formal semi-structured interview (#4 - May) explored in a more conceptual way the teacher's views of learning and pedagogy and curriculum management. This included their views on the most valued types of learning (e.g. dispositions, skills,

knowledge) and the way they saw their role in promoting children's learning. It also focused on the teachers' views (and use) of the CG and its relationship with the MEM pedagogical model. This interview included some specific questions on issues that emerged from data collection and elicited their views and rationales on these (e.g. the concept of 'practising' as a learning strategy). Since this interview was directly focused on theoretical and conceptual understandings, the interview schedule was provided in advance in order to allow them some opportunity for reflection.

Informal interviews or 'conversations with a purpose' (Burgess, 1988) occurred frequently (at the end of the morning or afternoon) and were focused on situated problems or events with the aim of gaining more information and understanding about the teacher's views, their pedagogical intentions, expectations and reflections / interpretations of what happened in the classroom.

Table 4.2. Interviews with teachers

Interview	Time	Content focus	Aims
#1 Formal, semi-structured	October	Organisation of the learning context: space and materials and time routines	Teachers' description and rationale for the organisation of the learning environment. Elicit underlying theories of the MEM organisation
#2 Formal, semi-structured	October	Organisation of the learning context: planning and assessment, work with parents and community	
#3 Formal, semi-structured	November	Teachers' professional history and involvement with the MEM movement	Understanding the professional history of teachers, their encounter with the MEM movement and its significance for professional development.
# 4 Formal, semi-structured		Teachers' views of learning and pedagogy; teachers' management of curriculum. (Interview schedule provided in advance)	Perspectives about pedagogy and learning. Teachers' understanding about the relations between the MEM model and children's learning. Teachers' management of the curriculum and use of C.G. in their practices.
Informal conversations	Throughout the year.	Situated problems or events	Understanding about observed events through the teacher's views, their pedagogical intentions, expectations and reflections / interpretations.

In order to build confidence and give power and control to the respondents – building a positive and ethical context for communication (Cohen, Manion and Morrison, 2000) – it was important to allow the respondents to choose the location and schedule for interviews, explaining the purposes and content of the interviews in advance and

offering them the opportunity to revise transcripts. Respondents' perceptions of the researcher's social and professional position can never be avoided, however much effort is made to build an egalitarian relationship (Brown, 1998; Cohen, Manion and Morrison, 2000). Constant reflection about how respondents might view the researcher and the questions or activities proposed during interviews occurred during the planning, fieldwork and analysis stages of this research.

Interviews with other significant adults (Magnólia's head teacher, Amoreira retired teacher, assistants of both classrooms) directly involved in the classroom life were undertaken throughout the year (Table 4.3.). These were also active participants in the classroom community and brought to the classroom their own professional histories, views of children's learning and their role in promoting it, as well as views on the MEM pedagogy. Most of these professionals did not belong to the MEM movement (except the Magnólia head). These interviews helped to understand their appreciation of, as well as their resistance to, such a pedagogical model, and their participation in the classroom. Furthermore, it provided information about the way the MEM model was characterised and understood by professionals outside the movement.

Table 4.3. Interviews with other adults

Interview	School	Aims
Head	Magnólia	Understand different professional histories, views of learning and pedagogy, their role in children's learning and views of MEM model (characteristics, most valued features).
Assistant	Magnólia & Amoreira	
Retired teacher	Amoreira	

Children's interviews

Particular attention was paid to the way children in the two classrooms perceived and understood their learning environment and how they viewed themselves as learners within this context. This went beyond observation of children's behaviour (action and interaction) and attempted to understand the particular ways in which children interpret and give meanings to situations by engaging with them through interviews (including informal conversations) and listening to their explanations, opinions and experiences. Interviewing children about such matters represents a view of children as "competent (to understand, to reflect, and to give accurate and appropriate responses)" (Brooker, 2001:163). Interviewing children as a way of accessing their views and experiences is, however, a research strategy that has challenged researchers in methodological terms

(Clark, 2004; Oliveira-Formosinho and Araújo, 2004; Pramling, 2004). The major challenge is in designing interviews and contexts where children are most able to display their competence in thinking and expression without the constraints of adult-child power relations, and in situations where children can make sense of the questions and the situation (interview) they are engaged in (Donaldson, 1978).

In this study, the long-term presence of the researcher in the classroom helped to increase familiarity (Brooker, 2001). The role of the researcher in the classroom, one which was different from the teacher or the assistant, with low intervention, facilitated a more balanced power relationship. Interviewing the children in pairs was also carried out to dilute adult-child power relationships (Lewis, 1992).

The purposes of interviews were explained directly and sensibly to the children, helping them to be more clear about the intentions of the researcher (Brooker, 2001).

Interviews with children consisted of both 'formal' interviews and informal conversations (see Appendix 4 'Children's interview schedules' and Table 4.4.). Informal conversations occurred throughout the year in relevant situations and elicited children's meanings of those situations ("What are you doing? Can you explain how you use this?"). Informal conversations had the advantage of arising organically from the context and were therefore more conducive in getting children's natural and sensible responses to the researcher's questions.

The first 'formal' interview occurred at the end of November and focused on children's learning experiences and perceptions of learning. Questions were centred on "what have you been learning here" and "how did you learn such things". The same interview was planned to be repeated in the end of the year to trace changes on their perceptions of the nature and processes of learning. However, as the fieldwork progressed it was found that such intensive data collection was at risk of interfering with the daily-lives of the classrooms and this lead to the decision to cancel the last of these interviews.

Data on children's views of learning and learning processes were also collected through informal questionings during classroom activities. A question about the purpose of school "why do you come to school" or "why children come to school" was also prosed in the classroom context during the months of April/May. Such interviews aimed at understanding the extent to which the children saw themselves as learners, the school as

a place to learn (or to play, or to be cared for) and their understanding of learning processes.

The last "formal" interview (May) was designed to gather children's views of their learning environment, how they understood the purposes of learning activities and some of the tools they use in the classrooms. It also aimed at understanding how children perceived the rules of the classroom and the roles of different participants in such communities of practice. Lastly this interview aimed to gain an understanding of to what extent the transparency of the sociopolitical organisation of practice, of its content and of the artefacts engaged in practice, were perceived by the children to be giving them opportunities for full participation (Lave and Wenger, 1991). The interview started by focusing on time routines "Now that I have been here for such a long time and I am about to finish my work, can you help me to see if I understood clearly some things in the classroom? First, what do you do from when you first come to school in the morning until the end of the day?" The researcher wrote down what the children said (despite tape-recording) to demonstrate to the children that they were being taken seriously; this also helped the children to organise their thinking (Brooker, 2001) by sharing and cooperating in the organisation of writing (saying for example "Wait, I am writing"; "then we go to the meeting..."; "I have that already, ... so after lunch what do you do?"). In the second part of the interview children were presented with photographs of classroom situations (CM and CT) and their classroom "piloting tools" and asked to identify them and to explain their purpose as well as the roles of children and teacher and the perceived rules (e. g. "who writes in the 'Diary' and when?"). These findings are integrated through different sections of chapters 5, 6, 7 and 8.

Table 4.4. Interviews with children

Interview	Time	Focus	Aims
Informal conversations	Throughout the year	Situated concrete events	Understanding the child's view of particular activity or incident.
"Learning" (formal / individual)	End of November	Things children learn in school and how they learned.	Children's concepts of learning and learning processes. Children's learning identities
"Why children come to school" (informal / individual)	April/May	School purposes	Children's understanding of school purpose
"Routine, CT, CM and piloting tools" (formal / pairs)	May	Piloting tools, council meetings and communication time	Children's understanding of time routine, piloting tools and whole-group situations (content, purpose, rules and roles)

Documents

Documents displayed in classrooms are 'visual and written texts' carrying messages about the learning culture in the classroom, about the activities, the rules and the organisational system. Kress and his colleagues have highlighted how curriculum is communicated through visual materials (texts) displayed in the classroom and how student identity is constructed through visual modality (Kress and Leeuwen, 2001). In their perspective, pedagogy is conveyed through a multimodal communication system. From a socio-cultural perspective, they are seen as mediating tools for thinking and action, power and authority (Wertsch, 1998). In this study the relevant questions are: what kinds of knowledge are displayed and valued, how do children and adults use them, and in which ways do they communicate messages about learning processes and meanings, about children's and teachers' roles and identities? In addition to classroom displays, this study uses documentary data of different kinds (Table 4.5.): children's products, piloting tools, classroom curriculum projects and school educational projects.

Table 4.5. Type of documents collected and analysed

Type of documents	Content
School educational project	Characterisation of school and community, the aims of the school, a diagnostic of specific needs and a specification of strategies for tackling the answer to identified needs.
Classroom curriculum project	Educational aims, principles of learning and teaching, pedagogical options and curriculum content. This document explains the teacher intentions and educational practice.
Piloting tools	Documents used by teachers and children to support the regulation of learning and social life in the classroom: Activities Chart; classroom Diary; Day Planning; Responsibilities Chart; 'We want to show, tell or write list'; Attendance Chart; Classroom Rules.
Teachers' planning and assessment instruments	Planning and assessment instruments used to communicate with other adults (parents, staff, primary teachers): portfolios, individual assessment records, reports on children's progress.
Children's productions	Photographs of children's individual or group products.
Classroom displays	Photographs of classroom arrangements throughout the year and particularly displays.

4.3.4. Data collection schedule

Piloting

A two-week piloting study, in two similar nurseries to the main study sample, was conducted to try out the different methods of data collection (interviews with teachers and children, participant observation, focussed observations and using tape recording and documentary analysis) and to explore their adequacy as research tools for the purposes of the study. Some adjustments were made to the interview schedules and themes, partly arising from emergent issues from the field, and partly from a joint reflection with the teachers. The pilot study also had a formative function (Yin, 2003) for the researcher in terms of adjusting and finding the appropriate place in the field in relation to the different participants, as well as the correct approach to different data collection techniques. Finally, it provided an opportunity to plan the main study more adequately in respect to amount of data to be collected, strategies for reducing the risk of unexpected factors, and how to deal with ethical dilemmas.

Major fieldwork

The main fieldwork was carried out throughout the academic year, between September 2003 and end May 2004 (Table 4.6.), alternating between the two settings every fortnight. Each week two or three days were used for data collection, and the remaining days for data handling, transcription and preliminary analysis.

Table 4.6. Schedule for data collection

	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Pilot study												
Analysis of pilot design main study												
Negotiating entering the field												
Fieldwork												
Interruptions for Writing and analysing												

A summary of all the data is available in Appendix 5 'Types and amount of data'.

4.3.5. Ethical issues

Ethical research is based on principles of respect between the researcher and the research subjects (Walsh, 1998a:55). A respectful relationship with participants acknowledges their own rights, sensitivities, knowledge and interests (Spradley, 1980). This implied being honest and clear about the research aims and methods, avoiding deceptive strategies (Coady, 2001), or causing any harm. This also implied working towards a more balanced power relationship, which was not always easy to build in reality. Both researchers and subjects are socially positioned and tend to reproduce in their relationship the power relationships of the groups to which they belong (for instance: children/adults; parents/professionals; academics/teachers). Reflexivity by the researcher on her own position and identity and how she perceives the subjects – as knowledgeable and competent – was crucial (Hammersley, 1999). As Walsh points out, "the researcher's identity is there when the researcher first arrives" (Walsh, 1998b:126). These issues were openly discussed with the teachers in the first weeks of the fieldwork clarifying the researcher's role (e.g. one that was in the classroom to see and understand how teachers worked, rather than to tell them how they should work).

One of the most important ethical procedures is informed consent from the subjects. In this project it involved various steps and procedures. Firstly, personal contacts were made with MEM teachers followed by contacts with the school head teacher, where information about the research aims, questions and methods were clearly presented and discussed before their consent was given. After these initial personal contacts, a tripartite (researcher, teacher and school head) research contract was signed (see Appendix 6 'Research contract'). The research contract included the aims and questions

of the study, the role of the researcher in the field, the methods of data collection, the researcher's responsibilities, and the institution's responsibilities. Parental consent was also requested in written form after participation in parents' meetings when a personal presentation was made of the research and the way in which the data would be used in the future. The right to withdraw at any time and the confidentiality of data were assured (see Appendix 7 'Parental consent').

Particularly during long-running projects, informed consent must be a recurrent practice. With young children especially, formal "informed consent" does not make sense; although parental consent was important, children were informed about the role of the researcher in their classroom, they were not deceived during data collection and were protected from any discomfort. This required attention not only to what the child said but also to how he or she behaved. Gaining consent and finding a place (acceptance) in the research site was a continuous process requiring constant self-reflection (Grieshaber, 2001) and self-regulation towards the aims and methods of the study. It was also a process of constant negotiation with the participants (Graue and Walsh, 1998; Siraj-Blatchford and Siraj-Blatchford, 2001). A relationship of mutual trust between researcher and participants required that confidentiality was assured not only in written accounts but also during fieldwork when reassurance was given that information gained from some participants would not be disclosed to others (Ting, 1998).

4.3.6. Analytical process

The analysis of data was done using Nvivo software. Beyond the general analysis of the MEM model in practice in the two classrooms, the analysis focused with particular detail on four components of the MEM pedagogy, which were hypothesised to make a particular contribution to the components of effective learning (see section 4.1). These components were: Council Meetings, Communication Time, Activities and Projects and the "piloting tools" used in the classroom.

Using Nvivo – building up a coding system

A system of nodes and trees was developed prior to data analysis, using the theoretical background of the study (as a whole), the research questions, and pilot data. This conceptually driven method helped to focus on the research questions and provided guidance for data collection (Miles and Huberman, 1994:65). The conceptual

framework of analysis of the pedagogical model (Evans, 1982; Spodek and Brown, 1993) provided a coding structure which included different categories: conceptual ideas (views of children, views of teaching and learning); classroom organisation (time routine, space and materials); curriculum (curriculum areas); planning and assessment (teachers; children; formative assessment: task related and person related feedback); and learning and teaching processes. Within this general framework, the literature on learning to learn was used to develop more detailed coding which included: resilience (response to failure, attitudes towards learning); metalearning (self-appraisal and self-management) and different literacies. Drawing from socio-cultural theory to study learning and pedagogy, new codes were introduced to account for the social structure of the activity as well as the mediated process of human activity: grouping (individual versus group, mixed age), rules (explicit and tacit), division of labour (roles, power and decision-making). The social and historical contexts to which these children and teachers belong included nodes on the MEM movement (participation, views of the model, and views of the movement), the classroom context (community, parents and school), and the teachers' stories (personal and professional).

When the transcripts of interviews, videos and field notes were introduced into Nvivo it was evident that the data looked much richer and more complex than the categories devised 'a priori': codes emerged from the analysis of data in a more grounded way. This process increased significantly the number of codes in the coding system. Recurrent analytical processes permitted the collapsing and reorganisation of codes and integrating them with the theoretical coding framework. The overall process was therefore iterative.

In analysing classroom events, a "goal-oriented social process" coding was followed, conceptualising both action and genre (Wells, 1999:238). Each main activity was thus divided into independent 'episodes' - an episode consisting of an independent action carried out during the activities (Wells, 1999:237). First, the type of episodes was coded in terms of its main goal. For example, codes for Monday CM included 'showing telling and writing', planning the week and day, and assigning responsibilities. Friday CM included 'We liked', 'We didn't like', 'We did' and 'We want' (the four columns of the Diary), which were discussed separately. For Activities and Projects the codes included the classroom areas, separate codes for each project, as well as a code called 'teaching episode' and one 'children playing and working together'. Lastly, in CT the codes

were: PRE - children presenting some type of work or learning experience carried on in the morning; DIS - discussion of a rule or about a problem or a topic of interest, DEC - deciding collaboratively about something, PLAN - to plan some parts of a common project, COMP - complement one activity and ACT - a whole-group activity such as listening to a story or rehearsing a play. More detailed analysis of the interactive process used codes both generated from the literature and from the analysis of data; these were set into two different groups: the teacher and children participation in the interaction.

The main advantages of using computer software for qualitative analysis were that it allows the organisation of data according to different functional criteria (nodes, attributes, sets of data) and offers increased flexibility in the manipulation and analysis of a large amount of data (Tesch, 1990). It allowed not only retrieval of particular sets of data for specific analysis but also comparison (for example teachers' questions in two classrooms) and the establishment of relationships between particular components such as children's display of metacognitive thinking across different actions: 'showing and describing', 'questioning and commenting' and 'evaluating and ideas for improvement'.

Qualitative summaries of data

Particular sets of data from fieldwork notes and videos were summarised into manageable documents: MCM, FCM and CT throughout the year; Projects in Magnólia and in Amoreira. Such summaries recorded: the date of the session; the type and focus of the 'episodes'; the children involved; and a summary of the interactions between the teacher and the children (see example in Appendix 6 'Samples of Annual summaries of CT in Magnólia and Amoreira'). These summaries enabled building a picture of each activity in each classroom throughout the year with a broader perspective (horizontal axis of analysis), and then the more detailed analysis (vertical axis of analysis) of transcribed videos.

Quantitative descriptions of data

Quantitative analysis was used to reduce data and to reveal patterns of phenomena: from the children's interviews to analyse their views of the classroom environment and activities; analysing the types of activities children engaged in from the analysis of the piloting tools; analysing children's participation in whole-group activities and projects extrapolated from the qualitative summaries of projects, CM and CT.

Analysis of the video transcripts

After having built up the general picture of all CM and CT sessions recorded through field notes, a detailed analysis of video transcripts was undertaken using the Nvivo coding system. After the process of coding described above, it was possible to manipulate and explore the data by relating different coding dimensions, analysing particular types of actions associated with different learning processes, and also exploring differences and commonalities between the two classrooms in relation to their individual practices.

4.3.7. Building trustworthiness

Building trustworthiness relates to the efforts and ability of the researcher to ensure the quality of research. It deals with the scrutiny of coherence between research design, empirical work, analytical processes and conclusions within the theoretical framework and the research questions (Spencer et al., 2003; James et al., 2005). Building trustworthiness according to many researchers is about warranting that the research conclusions are grounded in sound evidence provided by the research process (Gorard, 2002; Furlong and Oancea, 2005; James et al., 2005).

Within the interpretative paradigm, trustworthiness refers to credibility, authenticity and establishes the scope of generalisability or transferability (Lincoln and Guba, 1985).

Credibility

Within this study systematic efforts have been made to provide a credible (valid) account of the MEM model in practice and how children changed over time in participation in processes conducive to learning to learn using the tools of the MEM model. This was done in varied ways across the research process.

The sample strategy at the teacher's level prioritised teachers who were recognised by the MEM community as two professionals who are able to demonstrate practices that were in consonance with the MEM model and who worked in institutions that allowed for the application of the full model.

The use of an in-depth case-study strategy with ethnographic elements offered the possibility of looking holistically at the MEM model in practice, thus providing a comprehensive body of data across all the components of the MEM model as well as the institutional and community contexts to which the two classrooms belonged. The length

of time spent in the field permitted the prolonged engagement essential to "learning the culture, testing misinformation introduced by distortions either by the self or of the respondents, and building trust" (Lincoln and Guba, 1985:301). Moreover, it permitted persistent observation and 'thick description' (Geertz, 1973) offering the conditions for a rigorous and deep analytical account.

Triangulation was used to provide a credible and trustworthy qualitative account (Lincoln and Guba, 1985; Merriam, 1988). Triangulation refers to the combination of different approaches /points of view to the object of study (Stake, 2000a; Yin, 2003). In this study, triangulation was applied at two different levels: firstly, it meant using different research strategies to study the same phenomena (i.e. interviewing children about Communication Time (CT) and also observing them during CT); secondly, getting different perspectives on the phenomena under study (asking the children about the purpose of CT and asking the teachers' about their views of CT and how they perceive the children's understanding of its purpose). In relation to the account of the MEM model and its contribution to learning to learn, obtaining data from two classrooms and looking for the consistencies in results (between contexts) increased the confidence and validity with which to assert the (relative) power of the MEM pedagogical tools. This can also be seen as a triangulation strategy "verifying the repeatability of an observation or interpretation" (Stake, 2000a:443).

The combination of qualitative and quantitative (descriptive) analytical methods facilitated a look at both the type of participation and the frequency of some participatory behaviour such as children's participation in different roles or children's engagement in certain types of interactions. The analytical process also involved the comparison of observations of what happened in the classrooms, with the meanings participants attached to their practices (emerging from data), and the ideal representation of the MEM model (presented in chapter 2). Coding systems were further developed in an iterative way: grounded on the theoretical background of the study (see theoretical and analytical framework) and complemented with emerging coding categories from the transcripts (section on analysis of data). In this way the analysis interrogated the data in terms of what could be seen below the surface through 'thick description' (Geertz, 1973) and also in terms of the occurrence (or not) of theoretically driven effective teaching and learning processes.

Authenticity

Authenticity refers to the quality of the presentation of findings and their ability to represent the phenomenon (Guba and Lincoln, 1989). Within an interpretative paradigm the validity of the researcher's representation of the MEM model demands that we consider the issue of authenticity of account provided by participants. This study used triangulation of data, building rapport with the participants (Janesick, 1998), and an ethical research stance (see 'ethical issues' below) in order to ensure that the participants' accounts being reported were authentic. The day-to-day informal conversations with the teachers about classroom events provided opportunities for them to reflect and elaborate on their views about the complexity of classroom practices. Reflexivity on the researcher's preconceived views and the extent to which they had the potential to compromise 'objectivity' was also an important consideration. A research diary was kept during fieldwork supporting the researcher's reflexivity. Furthermore, a clear and transparent analytical process, supported by an 'audit trail' (Lincoln and Guba, 1985:319) allowed scrutiny of the authentic nature of the account.

Generalisability

The issue of the ability of case-studies to provide generalisation is a matter of great debate among qualitative researchers. Some would argue that generalisation is a concept from positivist research paradigms defined as "the degree to which the results can be generalised to wider populations, cases or situations" (Cohen, Manion and Morrison, 2000:109). As case-studies do not usually use a representative sample but a more purposive one, no claims can be made that the results of such studies would apply across the total population (Lincoln and Guba, 2000; Stake, 2000b). This is true in this study, as one cannot expect to make generalisations about all MEM classrooms in pre-schools in Portugal by looking at only two classrooms.

Other researchers however, adopt a different stance and suggest that case-studies should have a wider resonance (Yin, 2003) or should generate theories that apply to other situations provided that the cases are similar (Lincoln and Guba, 2000). In keeping with this idea, it is important to stress that the intent and purpose of this study has been to provide a valid account of the MEM ECE model in practice. The use of the term 'valid' here does not lay claim for the generalisation of findings to other contexts or populations but to the trustworthiness of the data which are linked with the authenticity in accounting for the phenomena in the MEM model (Schofield, 2002; Furlong and

Oancea, 2005) and the statements provided by the researcher (Edwards, 2001a; Hughes, 2001). The sampling strategies previously described seek to ensure that certain claims can be made about the MEM model based on the practice of these two teachers. Furthermore, a carefully planned observation schedule permitted drawing parallels between these two classrooms according to the same dimensions (see within-case sampling) of the MEM model in practice and therefore to generate theory about the MEM model.

Chapter 5 Two Communities applying the MEM model

In this chapter we will enter the contexts of the two classroom communities applying the MEM model. We will start by presenting analysis of the settings, the local communities to which they belong, and the staff and other members of the team. Then the focus moves into the two classroom communities presenting its members (teachers and assistants, the children and their families), as well as some structural features of the MEM model (classroom space and materials; time routine; parents, community and children's learning; and planning and evaluation system).

The analysis presented in this chapter uses different sources of data:

- Field notes were written during observations of the settings and the classrooms, staff meetings and in-service training, one parents' meeting, and afternoon activities.
- Interviews: #1, #2, #3, #4 and conversations with teachers throughout the year.
- Interviews with the Magnólia head, the assistants in both classrooms, and the Amoreira retired teacher.
- Interview with children about daily routine "Routine, piloting tools and group situations".
- Photographs of the classroom taken every month of fieldwork; photographs of 'Calendars' and 'Attendance Charts'.
- Documentary analysis of: Amoreira internal regulations, Classroom Curriculum Projects in both classrooms, evaluation records of individual children, individual children's books (portfolios), and letter from Carolina.

5.1. "Jardim de Infância da Amoreira"

5.1.1. The nursery school

The "Jardim de Infância da Amoreira" was a state nursery school. Located in the outskirts of the urban area, next to a forest. It had an enormous playground with trees and flowerbeds, a sandy area with old, unappealing playground equipment and car tyres. Like many nursery schools in rural areas it had a single classroom. A primary school of two classrooms was located just down the road. The nursery setting comprised two buildings: one with a 49m^2 classroom, very tight toilets for children, adult toilets and a small kitchen (meals were provided by a local catering company). The second building had a 60m^2 room for after-school activities, meals, and toilets for both children and adults. During fieldwork the primary school underwent a major refurbishment and its children were accommodated in the nursery after-school activities building until March. During this period, nursery children were required to use only the small classroom for activities, meals and after-school activities.

The funding of ME nurseries is shared between the central government Ministry of Education (teacher's salaries, materials – 288 € per year per classroom) the Ministry of Social Affairs (meals and after-school activities for low income parents), local authorities (premises, furniture and hardware, some outings or celebrations, assistant and social worker's salary), and parents' voluntary contribution (5€ month per child for materials and activities).

5.1.2. The Amoreira local community

Amoreira was situated in a mixed rural /industrial village in the North of Portugal. The small village (200 habitants) was composed of dispersed housing built alongside a main road. The population's activities were mixed: subsistence agriculture, industry and local commerce. When first visiting the nursery school in September there was some disappointment with the village where the cosiness of the urban design transmitting a sense of community life was not present. On the first days of fieldwork Carolina spoke with great conviction *"it looks like there is nowhere to go but we can always find interesting things" (Carolina #1).* Although the local population did not have significant economic needs, their level of education was low. They preserved some traditions but, in general, cultural events were not promoted in the area (Group

Curriculum Project, 2003); there were neither recreational associations nor local community celebrations.

5.1.3. The Amoreira staff

Staff at Amoreira included one nursery teacher (Carolina), one assistant (Ms Aldina) and one "social worker" (Sandra) responsible for assisting during lunch breaks and after-school activities. During the study year, uncommonly, the nursery teacher from the previous year, Margarida, remained in the classroom while waiting for her retirement. ME teachers are allocated each year to nurseries through a national placement scheme. Until 2006, a significant percentage of teachers (30%) had no permanent jobs: Carolina had never worked at the same nursery for two years in a row. This was also her first year at Amoreira.

State nursery teachers are well paid (compared to those in private or charity nurseries). Their career progression depends on years of practice and in-service training. They work 35 hours /week, of which 25 hours are for curricular activities with children and 10 for planning, evaluation, team work and contacts with families and community.

School management

Both the nursery school and the primary school were part of a 'Group of Schools' (including 8 nursery schools (156 - 3 to 6 year olds), 11 primary schools (355 - 7 to 10 year olds), and one secondary school (398 - 10 to 18 year olds). These schools were managed together and shared some facilities (mostly administrative).

5.1.4. The Amoreira classroom community members

Carolina, the Amoreira teacher graduated as an *"educadora de infância"* in 1986 and completed an advanced diploma in ECE in 2003. Carolina was particularly interested in working with young children as "*they are very curious and interested, they are starting to know all about the world and are open to question and to reflect about things*" (Carolina #3). She considered that the children were still at an early stage of social development and therefore open to developing an open and positive understanding of the others.

> I find fascinating their searches about the world, to get them interested, the fact that they are very attentive, very critical and so... their interest about the world which then fades away or becomes more channelled; the arising for social relationships... I think it's fascinating. There is always

> the background of the family, of course, but not yet very socially charged there aren't yet big stigmas... and that's why it fascinates me to help them dealing with that and going around such issues helping them to think and to deal with them. (Carolina #3)

Carolina saw that in the MEM, children were treated by teachers as their peers: they were pro-active partners, and played an important part in their own educational process.

> They are active elements ... once Dg was cooking with me and a child's mother came and commented: "Oh, Ms Carolina I can see that you have a lot of helpers!" and he responded "we are not helpers we are cookers!" I think that illustrates what I think. They are not only learners but they play a fundamental part in that process. (Carolina #3)

Another fundamental MEM characteristic, according to Carolina, was the view that learning is a shared and collaborative process, emphasising communication and critical discussion.

> Yes, that's what I find most interesting. They learn with each other, they criticise one another and they help each other; and they grow together ... being able to criticise and ... "ok, she is still young and we are going to be patient with her we are going to help her..." I think that's fascinating. (Carolina #3)

Margarida, the previous year teacher, was a qualified teacher with 32 years of practice, waiting for an imminent retirement. This was her fourth year at Amoreira pre-school. Margarida's role within the Amoreira nursery changed significantly when Carolina assumed the leading role in teaching. Margarida told Carolina *"you can now decide whatever you want in relation to the classroom. It is your classroom*!" (interview with Margarida). They decided that Margarida would take care of paper work while Carolina would take the lead in what concerned pedagogical practice. Taking a peripheral role was not always easy for Margarida but she tried to be discreet lowering her participation in the activities and getting involved with backstage work. Her view of the MEM model was a positive one *"I say that if I were to begin now, I would try to adopt this method! But we didn't have access to in-service training..."* (interview with Margarida)

One of the most interesting things in the MEM model was, according to Margarida, the Council Meetings:

> It's about them finding solutions to what went wrong. "So, what do we have to do? And they find out... either they apologise or... it's them reaching these solutions that I find very positive. "How are we going to solve?" If we apologise the problem is solved. And it's hard to

> apologise! So they get use to do it from an early age. (Interview with Margarida)

Ms Aldina, the assistant was 50 years old and had been working at Amoreira nursery since it opened in 1987. She did four years of formal schooling and started to work in agriculture at a very young age. She went back to finish school in the evenings and when she turned 20 she started working as an assistant at the local primary school. Ms Aldina was the only permanent member of staff at Amoreira: usually, every year, she met new teachers and adjusted to their ideas and practices adopting an open and positive approach:

> We have to live with the teacher, with the children, that each case is different... and the parents. They are also all different. Therefore I have to adjust to everyone that comes... and I learn with every teacher that comes... (interview with Ms Aldina)

Although she has been working alongside many teachers it was the first time she had worked with a MEM teacher. She valued the use of the piloting tools, particularly the 'Responsibilities Chart', and the meetings.

> They learn a lot (in the meetings) and do it with great pleasure. They really like to do their meetings. And I think they learn to talk and to take turns as well as to pay attention to one another... The responsibilities they are assigned they do it now with greater responsibility than in the beginning of the year; and also in their work they show much more interest now. (interview with Ms Aldina)

Teamwork among the professionals working at Amoreira was informal, based on day-to-day negotiations of actions and activities and mutual respect. Despite the teachers being allowed 10 hours a week to plan and evaluate, staff meetings never occurred in a systematic way at Amoreira, missing the opportunity to discuss the underlying principles of decisions. Carolina, as a newcomer in Amoreira, did not feel comfortable to share her ideas about the MEM with her more mature peers, opting instead to demonstrate her practice with the children.

The children and their families

The Amoreira community included 19 children ranging from 2:11 (2 years and 11 months), to 5:08 (5 years and 8 months). Children over five years-old represented 36 % of the group. The majority of children were girls (68%). One child (V 5:8) had speech problems. Only five children (26%) had been attending the nursery the previous year.

Amoreira's families were poorly educated working class families: 79% of the fathers and 74% of mothers had not completed basic education (9 years). Two fathers and two mothers had secondary education and only one mother, an immigrant from Bulgaria, had a degree. In terms of parents' occupations[3]: 15.8% of fathers and mothers had intermediate occupations; 73.7% of fathers and 52.6% of mothers had routine or manual occupations; 10.5% of fathers were unemployed and 31.6% of mothers opted to be at home. Every household had two parents, 42% were single child families, and 10% had three children.

Children's attendance rate varied from 11 absent to none, with an average of three children missing school each day. In addition, some children were often late for school, and a few attended school half-day only. The previous year some children had dropped out altogether. Nursery education was not seen to be important by the parents and there was no effort from the nursery staff to encourage the whole group to attend. Carolina saw this as a problem that she would have to overcome with the children. Throughout the year, the use and evaluation of the 'Attendance Chart' was crucial in supporting this issue. Coming to school was important not only for learning but also for belonging to the community. Despite some conversations with the parents on several occasions, it was with the children that Carolina consistently discussed these issues, so that they would feel themselves responsible for attending school. This reflected Carolina's view of children as competent and full citizens able to take responsibility.

In this community, all members had a somewhat mixed position in terms of peripherality in the community. From the previous year, there was Margarida, Ms Aldina and five children. They were considered 'old-timers' with regard to their knowledge of the basic rules of the classroom and school, but not in terms of the MEM pedagogical model. Carolina was a newcomer to the Amoreira pre-school community but an old-timer in the MEM model and therefore the only one in the classroom community who knew how it worked. Amoreira classroom was not therefore an established community of practice but one in a developing process.

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[3] Based on the UK standard National Statistics Socio-economic Classification (NS-SEC) http://www.statistics.gov.uk/methods_quality/ns_sec/default.asp

5.1.5. The MEM structure in the Amoreira context

The Amoreira classroom space and materials

The classroom area (49.3 m^2 - the law requires 2 m^2 / child) was reduced by the entrance area and a fireplace.

By the time Carolina arrived at Amoreira she encountered the classroom that had been used by Margarida the previous year: there was a home corner, many educational games, a large carpeted area with cushions, a few books and some tables and chairs. The walls displayed some adult decorations as well as some children's model artwork.

Following the MEM model Carolina started by reorganizing the areas of experience: The *Art atelier* included a 'Factory' (for junk modelling), one place for 'Painting' on the back of a cupboard, a small 'Modelling' table, a 'Blackboard', 'Cut & paste', 'Drawing' and 'Tapestry' materials; the *Library* and the *Office,* next to each other; the *Pretend play* area; the *Science Lab*; the *Constructions* area; the *Table games* area; the *Multipurpose area* operating with a set of tables assembled when the group got together and had their Council Meetings and Communication Time. Carolina then tried to provide: real materials rather than pretend ones (except for the Pretend Play area); she progressively selected new books whose quality she checked carefully; she prioritised open materials (promoting creativity) rather then limited closed ones (including some types of games and worksheets); challenging and diverse materials; displaying children's products rather than adult's stereotyped figures (Carolina #1).

Children's participation in the organization of the classroom

Although Carolina had very clear ideas about what kind of areas and materials should be in the classroom, she involved the children from the beginning of the year in building up the classroom organization promoting their ownership of the space as well as their responsibility for it. The children were involved in producing some of the piloting tools ('Activities Chart'; 'Area Identifications'; 'Responsibilities Chart', 'Anniversary Calendar'). Half way through the year the children were invited to assess the degree of challenge offered by the games on offer: "Isn't this game too easy for everybody?" Such reflection got the children to think about games as learning opportunities, thus searching for challenging rather than secure repetitive play (Sylva, Roy and Painter, 1980).

Carolina expected the children to find their own solutions for space and material problems identified in different assessment situations (see group evaluation of AC

chapter 7.1). Despite Carolina's great effort and an incredible ability to overcome problems, some limitations remained throughout the year, related to the space and materials. The size of the classroom did not allow enough space for children to work in collaboration; the materials also had size limitations (the notebooks from the office and maths areas were A5 size; and there was insufficient modelling material). Displays were small and the children's works as well as the group Piloting Tools were displayed in an unorganised way (some pinned on top of each other, in and outside displays), not promoting an aesthetic environment.

The time routine in Amoreira

The weekly routine in Amoreira offered a stable (although flexible) and clear structure to the community and accorded the MEM model (see chapter 2.2.).

Mornings at the Amoreira classroom started slowly. By the time Carolina arrived (9.00am), a few children only were already at the nursery, being cared by Ms. Aldina. Until 9.30am, Carolina helped the children with ticking their presence on the 'Attendance Chart', updating the 'Calendar', after which they slowly gathered around the tables making themselves ready for the Morning CM (see chapter 6). After the morning CM, the children went on to plan in the AC and started to work in the different areas of the classroom (see chapter 7). A pause for snack time was usually around 10.30am. As the year went by, the snack time stopped being a formal break: children would have their snack each according to "work in progress". The time to use the playground, which at the beginning of the year was set for after snack time, started being exchanged for time to be spent indoors finishing some activities. This showed a clear prioritisation for children's involvement and a classroom 'working' culture. Around 11.40am the group would get together for Communication Time where they would show and speak about their work within the group (see chapter 8). At 12pm the children got ready for lunch, going to the toilet and setting the table. Four of the children went home for lunch. The adults ate with the children, turning the event into a time of great interaction. After finishing their meal and tidying up the tables, all the children went outside to play.

The teachers were back at 1:30pm for the afternoon activities (picture 5.1.). Each afternoon had a fixed type of activity involving the entire group:

Picture 5.1. Afternoon activities schedule at Amoreira

Monday afternoons were devoted to story telling and books. This included either listening to a story, or the children making up their own stories and dramatising them in theatre with puppets, Chinese shadows, slides, transparencies, or small books. This time was also used to choose books from the library to take home (from April on) after filling in a registry.

Tuesday afternoons were either for "visits and outings" or music classes organized by the group of schools and requiring a trip to the main school 10 km away. This happened every fortnight, alternated with receiving visits from relatives and other members of the community, but mostly with outings (see work with the community section).

Wednesday afternoons were devoted to cooking, one of the favourite activities of the group. This involved learning about food as a cultural activity, knowing about traditions, health implications, and the physical and chemical properties of the ingredients and processes. Children experienced new tastes and shared the outcome of their cooking with their colleagues, with children and teachers of the primary school, and with relatives. The group was split into two different groups (mixed age) that cooked with Carolina once alternately every fortnight. After cooking, or sometimes during the process, the children registered in the recipes' book: title, ingredients, process and the names of the children involved (see Appendix 9 'Children's records in Amoreira').

Thursdays were the PE afternoons, which was usually performed on the playground. Carolina directed the activities, but she allowed the children to make their own suggestions. They played games, danced to music, and made use of their bodies in different ways requiring balance, control, stretching and strength. Carolina encouraged the children's effort and practice relating these with progress.

Friday afternoons were devoted to the FCM (see chapter 6), after which Carolina and the group sorted out the children's work of the week. While each child stored their own production on his/her individual folder, they commented on the quality of the products, children's progress, and the total production of the week. Here again a culture of practising and "doing things" was promoted and encouraged. This was also a time for the children to reflect on the type of work they had been doing and to negotiate or get motivated to do different kinds of activities.

The weekly routine was progressively implemented in the first month of the year and became a consistent structural tool of the Amoreira community, giving children the opportunity to be in control of the events in the classroom and to participate in decision-taking. Every change to the established routine was discussed within the group (e.g. celebrations and activities promoted by the 'Group of schools').

The weekly routine was framed according to the MEM model and included adjustments to the local conditions of the school (music classes outside the school) as well as the dynamic of that particular group (slow and long morning CM). The centrality of the group where children discuss and plan their activities, where they evaluate and extend each other's understandings reflects the social and communicational view of learning held by the MEM teachers. Individual children's participation in this established routine was encouraged rather then pressured.

Parents, the community and children's learning in Amoreira

From her experience, Carolina stated that working in small villages was especially difficult due to the habit of parents keeping a respectful distance from the teacher, which did not permit more open relationships to occur (Carolina #3). At the beginning of the year parents at Amoreira did not even enter the classroom. It was as if they saw the classroom as the teacher's territory. Carolina tried to build their confidence and slowly parents started to increase their involvement with the school and to see themselves as partners in Amoreira's life. Carolina recognised that her work with parents was limited as every year she moved to a new school (Carolina #2).

Carolina paid much attention to the relationships the children established outside the classroom with any member of the community, as she thought such contacts helped the children's learning to be grounded in real life experiences (Carolina #4).

Thus throughout the year often the group went out or invited someone to go to the school and diversify children's experiences (23 initiatives see Table 5.1.).

Table 5.1. Amoreira outings' summary

Date	Transport	Place	Content
September	Walking	Local neighbourhood	Getting to know the place, picking up some leaves and grapes; visit to a home for people with disabilities.
September	Walking	Local Orchard	Picking up apples and corn.
October	Walking	APPCDM	Invited for tea
October	(Jr's mother driving) APPACDM Mini bus	APPACDM	Halloween party: children were dressed up and performed a dance
November	Bus	Main school	Visiting a chemistry lab to get ideas for the classroom lab
December	Train	Nearby Town	IPJ theatre and Christmas decorations and lights. They stayed until dark.
December	Bus	Main school	Book fair
December	Bus	Nearby village	Visit to a Circus, offered by the local authority
December	Walking	Local place	Picking up moss for the nativity
January	Walking	Local place	Singing traditional songs "Janeiras", door to door.
January	Bus	Porto	Visit to the airport and watching the "Sitio do Pica-pau Amarelo" play.
February	Walking	Verónica's grand mother's home	Visit to a farm to see a newborn calf, milking the cows and tasting the milk. They also ate some nectarines
February	Walking	Andreia's parents business	Visit to a car repair workshop with tows and other machinery.
March	Bus	Swimming pool.	Invited by the local authority president to whom they had written a Christmas letter
March	Bus	Visiting Diogo's home	Watch the newborn pigs and other animals.
March	APPACDM Mini bus	Ms Aldina's husband's bakery	Learn to bake an Easter traditional cake "folar"
April	Walking	Primary school	Pedy-paper with primary school children
April	Bus	Main school	Listened to a story teller with the parents, celebrating "world book's day".
May	Bus	Swimming pool	Swim
1 June	Walking	Local place	Children's day Picnic with primary school
June	Walking	Daniela's grand-mother aviary	Watch new born chicks
25 June	Bus	Main school	Europe's party
29 June	Bus		Visit Maia Zoo, Kurtilandia and Furadouro beach

The Amoreira classroom community became part of a greater social network developing children's sense of belonging to the outside world. Children enriched their life experiences and most outings were 'food' for work inside the classroom both before and after they occurred.

In addition, there were some visitors to the Amoreira classroom. For instance, relatives (mostly mothers) visiting children on birthdays, and all the fathers visiting the classroom on fathers' day when the children shared their classroom activities with them. Parents also went to the school to teach or share something with the group (newborn baby; newborn dog; Christmas in Bulgaria), while a group of nurses visited to advertise a dental health campaign.

> It is important as it values parents who feel that they have things that they can teach. ... and then it is a way for them to see the school in a different way. In the end everybody can learn and teach and they have things to teach at school. The school is not something for teachers to teach. The school can be about learning many things; about professions, life and about themselves (Carolina #2).

Meetings with individual parents occurred only if either the teacher or parents felt the need. Once a week Carolina stayed at Amoreira after 3:30pm to meet with parents.

The planning and assessment system at Amoreira

The system of planning and evaluation at Amoreira was based on principles of cooperative formative assessment (Amoreira Classroom Curricular Project) (see also chapter 2.2.1.). In addition to the cooperative formative assessment, the system at Amoreira included other planning and assessment practices, either at the group of schools level, or mainly assumed by Carolina (Table 5.2.).

Table 5.2. Amoreira's planning and evaluation system

	Practices and Situations	Participants	Tools
Group of schools	Monthly Team meetings: planning and evaluating common activities	Pre-school teachers with pre-school coordinator	• Activities plan • Evaluating records of common activities
Classroom	Defining and writing the Classroom curricular project clarifying how the curriculum will be implemented during academic year	Teacher	• Classroom curricular project
	Teacher individual evaluation and planning notes	Teacher	Teacher's notebook Classroom curricular project
	Evaluation of individual children	Teacher	• Information /Synthesis of individual children
	Council meetings: planning and evaluating group activities and attitudes; responsibilities; attendance to school	Teacher and children	• Diary • Responsibilities chart • Attendance chart
	Planning and evaluating in Activities Chart	Children with teacher support; whole group	Activities chart
	Communications of projects and other activities in CT	Teacher and children	Children's products
	Supporting production processes in Activities and Projects time	Children with Teacher support	• Projects list • Activities and Projects documentation • Classroom materials • Children's products
	Tidying up children's work	Teacher and children	• Children's products
	Evaluating children's year	Teacher with individual children	Individual annual year book

At the group of schools level

Each group of schools is required to devise its 'Educational Project' which clarifies the school aims and functions, inventories problems and means of resolution, the available resources and needs (Lopes-da-Silva, 1998:111). This document was under construction during the fieldwork. The lack of an Educational Project, and the rotating system of teachers' allocation led to a fragmented and weak pedagogical identity for this group of schools, and the subsequent isolation/autonomy of each teacher. The group of nursery teachers' common work was reduced to planning and evaluating common activities such as "world water day" or " fathers' day".

Individual planning and assessment by the teacher

Carolina assumed some planning and assessment practices on her own, including the definition of the Classroom Curricular Project, taking daily notes and filling up individual evaluation sheets. The Classroom Curricular Project aimed at "clarifying how the curriculum will be developed during one academic year". This document reflected the social and institutional context (analysis of the local community characteristics, resources and needs; the group characteristics and the school premises and resources), the CG and the teacher's pedagogical model (MEM). Carolina wrote daily notes about what was done in the classroom, observations of children's difficulties and what needed to be done to overcome problems. According to her, these notes helped her to reflect about her practice, to think ways to improve it and to support children's learning (Carolina #2).

At the end of each term Carolina produced an individual evaluation record ("Information/ synthesis"). This record had three sections: behaviour within the group; acquisitions and attitudes. The main focus of these evaluations was on personal and social development, and on attitudes or learning dispositions. Some notes focused on specific skills and knowledge. These records functioned to give parents an account of their child's learning and were also passed on to the primary teachers.

Planning and assessment with children

The next chapters will focus on children's and adults inter-acting during CMs, A&P and CT, where we will see how the formative assessment and planning in cooperation took place in the classroom, and how they made use of the piloting tools.

At the end of the year Carolina organized a book recording the children's individual experiences and learning within the group. "This is the story of one year of my life..." (Amoreira Book of the year). Carolina together with each child organised and included individual children's work ("These are the texts that I said, Carolina wrote and I illustrated") within the group learning narrative. This process was, according to her, a very rich reflection that helped the children to have a sense of their own progress, difficulties and achievements (letter from Carolina July 04). Carolina saw such evaluation dialogues as giving the children the chance to be more active and in control of their own learning and she regretted not having implemented earlier in the year.

5.2. "The Magnólia creche"

5.2.1. The day-centre

The "Magnólia creche" was one of the nine day-centres run by a long established charity. It catered to 100 children aged four months to six years old from a mixed social background. It had seven classrooms: four classrooms for children from four months to three years old, one classroom for three and four year olds, and two classrooms for four to six years old. The facilities were purpose built in the 1960s with spacious and bright buildings including a library, staff room, medical room, directors' office, kitchen, laundry, staff toilets, gym, and storage room. The classrooms were large, each with en suite toilets. The premises aimed to suit both the care (long hours, food, hygiene, health) and education of young children.

The charity's own budget, central government subsidies and school fees (which varied with parents income), all contributed to fund these day-centres, allowing for high quality care and education with qualified staff whose salaries were above the IPSS common payment levels.

5.2.2. The Magnólia local community

The Magnólia crèche was located in a working class neighbourhood of a wealthy middle class town with a population of 33,300 inhabitants. This town had an historical centre with several monuments and has been a tourist hotspot for over a century. Its proximity to a larger city ensured further access to a wide array of cultural, economic and social resources. Despite being a wealthy town, its population is a mixed one, still with some pockets of poverty. Living conditions vary from slums and council flats to luxury villas.

5.2.3. The Magnólia staff

The staff at the Magnólia's crèche included the school head, seven nursery teachers, eight teacher assistants, four auxiliary workers (mostly for cleaning duties), one cook and three cooking aides, one seamstress, one housekeeper, a part-time medical doctor and a psychologist.

The teachers worked seven hours/day, including one hour spent in meetings and teamwork with the head.

The Magnólia crèche had a permanent staff. Training and investment in quality, namely the availability of quality materials and strong teamwork, was perceived as an advantage which prevented teachers from moving into the state sector (interview with head; conversations with teacher), despite having to work long hours with children for a slightly lower payment. For 15 years the institution had been making a great investment in the quality of the education it provides and indeed it was considered one of the best pre-schools in the area.

School management

The Education Director (ED) coordinated all crèches within the charity, being responsible for service quality with a strong educational focus. All the day-centres followed a common programme and the budget was centrally decided. At the Magnólia crèche, the head's management duties included assigning fees amounts according to parents' income, as well as keeping contact with parents, but her main role was maintaining and increasing the pedagogical quality of the crèche (interview with head).

In-service training and teamwork

The MEM model has been progressively adopted by this charity, with teachers' in-service training in this model being continuously in place since the 1990s. The in-service training included monthly meetings between the teachers and the heads from the different crèches together with the ED, sharing and reflecting on various themes and practices. Often there were invited experts to run training sessions. The crèche assistants also had in-service training, but separately from the nursery teachers.

The head of the Magnólia crèche considered cooperative teamwork the key factor to improve practices, innovation and change.

> Effectively the fact that we work in cooperation ... true cooperation ... because sometimes people are part of a team but in fact each one is confined within each 'corner' and that changes no practices. And the MEM movement is exactly the contrary: it's about facing real life problems and solving them, searching, using our knowledge so that everybody shares and discover things in common and in the end being happy with common achievements (interview with head).

The analysis of field notes showed that the daily meetings provided opportunities for cooperative learning and team building: teachers registering and documenting children's projects and activities; sharing and discussing practices supported by theoretically

grounded criteria; preparing for and sharing and discussing themes from the in-service training sessions (each session was attended by one or two teachers at a time); discussing institutional and professional issues; planning future events, renovation works, planning the academic year, training; personal and social conversations. The atmosphere in team meetings was cooperative and supportive in a relaxed but challenging manner. The head has had a crucial role in supporting deep reflection and theoretical grounded practice development thus building up the professional pride of the team. She was also crucial in supporting teachers in building confidence in their practices, at the same time imposing a constant challenge to improve.

The cooperative dynamics of teamwork and the sustained in-service programme promoted changes in practice and a general ethos of "doing better". The in-service training sessions provided valuable information, quality criteria and reflection on selected topics, which were discussed later at Magnólia team meetings.

The in-service training sessions differed from the teamwork in dynamics, engendering different attitudes in the teachers. The cooperative and supportive atmosphere observed during teamwork at local crèches was not always present, giving place to some competition between the different crèches. The will to present "better quality work" and respond to very demanding standards defined by the ED led sometimes to teachers' being fearful of criticism and frustration.

> The level of exigency is high. Patrícia feels criticised and expressed her feelings after the meeting. "I know but perhaps I couldn't explain. In MEM I never feel insecure but here it's as if I don't know what I am doing. Perhaps I have to think more about contracts". Patrícia feels judged by the ED's comments. "She never encourages or points to something positive. She only points out the need to change" (Magnólia October).

The high standards set up by the ED led both to the teachers' anxiety and to feeling a lack of encouragement from the director, and towards getting involved in working as a team (to show better results) and criticising teachers from different crèches who presented low or poor practices (Magnólia January). Such attitudes from the teachers were associated with performance-oriented learners as opposed to learning-oriented: they showed concern for being judged able to perform competently and knowledgeably. They were motivated by the satisfaction of doing better then others, and placed great emphasis on competition and public evaluation. Such attitudes contradicted the

cooperative ethos of teamwork and practice development implemented by the head in accord with the MEM philosophy (Niza, 1993).

5.2.4. The Magnólia classroom community members

Patrícia, the teacher - Patrícia's decision to become a nursery teacher came after one year of being employed at the charity as an assistant while carrying out her secondary studies in the evenings.

When Patrícia started to work in pre-school, she encountered the MEM model and it was "*love at first sight*" (Patrícia #3). Patrícia identified the application of the MEM model as the most relevant change in her way of perceiving young children's learning: from a view of the teacher as the centre of knowledge and decisions making, to a pedagogy based on children's interests and previous knowledge, and challenging them to new and significant learning (Patrícia #3).

Patrícia saw the cooperative work within the institution and the opportunities for in-service training as the key factor for quality development as it "*strongly promotes professional development. It's through seeing other colleagues' practices that we reflect and frequently improve our own practice* " (Patrícia #3). She highlighted the role of the head in promoting high standards of quality and constant reflection, building up a professional team to which she was proud to belong.

Patrícia's continuing search for professional and career development led her to pursue her studies in the evenings and at weekends. She finished a CESE (advanced diploma) in ethics and aesthetics and she was doing her masters degree in educational psychology during the fieldwork year. She had a particular interest in the arts and, in her view, the advanced diploma increased her knowledge of painting and the arts in general and her understanding of their interconnection.

Patrícia was an enthusiastic MEM member valuing, her experience in two ways: first, as a supportive community where she felt welcome, with a collegial and inclusive atmosphere provided support for professional growth; secondly as a community of learning based on sharing and constructive criticism by teachers from all levels of education at different stages of professional development, developing practices through a constant interchange between theory and practice.

> Then, it was about understanding why things were done in such way. It was about learning the philosophical principles valued within the MEM teachers movement ... in terms of teaching and learning processes... I always felt in MEM a space where I was among friends who were open to help me. It was a bit different from the charity here where there was always an evaluation load.... Sometimes we were not sure if... I don't know if I will talk or not ... if I share my difficulty or not as I am going to be evaluated...(Patrícia #3)

Concerning the MEM pedagogical model for pre-school education, Patrícia highlighted its fundamental characteristics as the dialogical based character of learning, children's learning to learn as they participate in planning and evaluation and becoming conscious of their own learning:

> I think the thing that characterises us is the crucial role of interaction between the children... The effect of sharing, communicating what we know, having to organize ourselves to share what we know... this conversational space, learning to listen to show, to think about what we are going to say as we are teaching others. Such respect for our own ideas, this is what in fact characterises us. The time that we give children to become conscious about their own learning, to own the learning process, allowing them to plan their day, doing what they want and learning from there. (Patrícia #3)

Patrícia's agreement to participate in the study was immediate. She strongly believied in the role of research to improve practices and showed great enthusiasm for having a researcher in her class from the beginning. However, throughout the year she encountered different difficulties (studying in the evenings, death of a close relative and a chronic illness) and in the middle of the study showed, for the first time, some apprehension in admitting she was not up to the study expectations.

Rosa, the assistant has worked at Magnólia since its opening 34 years ago. When the present charity took over the crèche from the company, she started to work in a classroom alongside a teacher. Since then she has had some training opportunities but the most interesting one in her view was one where Rosa learned *"to get closer to the children and to get more involved with them and to learn with them"* (Rosa interview).

Rosa saw her functions within the classroom as: keeping the classroom clean and tidy, taking care of children, supporting children's involvement in activities and supporting the teacher in her job.

> I don't really know! I think that it is a bit of everything. .... Ok, mainly it's about taking care of children. And then to help ... doing what the teacher asks and in a lot of occasions without her asking me one can "give a hand". First I like to stabilise the classroom so that Patrícia can carry on with her work, and the children also can work, doing something. (Rosa interview)

Rosa expressed the view that children learn not by impositions but by being allowed to engage in dialogue and negotiation, and being encouraged to choose and carry out their activities. She valued the Magnólia School and enjoyed working with children.

In the Magnólia classroom Patrícia and Rosa never met or discussed strategies or children's learning. Rosa was kept in a peripheral position from the community's main leading activities, although she was an essential element in supporting both children and Patrícia's work. Based on informal relationships and day-to-day negotiations, they complemented each other's work due to long experience on the job and their ability to adjust to each other.

The children and their families

The Magnólia community included 23 children ranging from 3:09 (three years nine months) to 5:08 (five years eight months) in September. The majority of children (57%) were over five years old. The group had eight (35%) girls and 15 (65%) boys, and included one child with Asperger syndrome and two children with some behaviour problems.

Most children (65%) were old-timers in the Magnólia classroom together with Patrícia and Rosa. This year eight new comers (35%) entered the classroom community, coming from another class in the same centre, which also used the MEM model. Despite having to adjust to the new community, they already shared experiences within the centre including the routines and piloting tools of the MEM model. This classroom was already an established MEM community of practice.

The group of Magnólia families had a mixed social status: 30% of fathers and 14% of mothers had not completed basic education (9 years); 20% of fathers and 27% of mothers completed secondary education and 30% of fathers and 27% of mothers had an academic degree (no information from two of the fathers and one mother). In terms of occupation: 39% of fathers and 22% of mothers had routine/manual occupations; 13% of fathers and 17 % of mothers had intermediate occupations; 35% of fathers and 57%

of mothers had managerial and professional occupations. One father was unemployed. Most households were two parents families (86%) and 61% were single child families.

Children's attendance rates were high and regular in Magnólia. The mean rate of missing children per day was two, ranging from five absent children to none.

5.2.5. The MEM structure in the Magnólia context

The Magnólia classroom space and materials

The Magnólia classroom was a bright and spacious room (~100 m^2) with one nine meters glass window opening to the playground. It was organized into separate areas: 'Arts area'; 'Games', 'Constructions and garage'; 'Home corner'; 'Writing and reproduction workshop' including the 'Office', the 'Printing press' and the 'Computer and printer'; 'Library and documentation area'; 'Maths and Science Lab' including 'Games with water'; and a Multipurpose area used during Activities & Projects time and where the group met for Council Meetings. All the piloting tools were displayed next to this area.

Patrícia's rationale for space organization included providing a functional environment that permitted interplay between each area so that they complemented each other (Patrícia #1). The furniture separating each area was low so that children could see what was happening in every area, getting curious and involved. In Patrícia's view, children must be able to move into a new activity without having to speak with the adult.

> Such an attitude is not only permitted but also fostered! (Why?) Because I think that the child is curious by her/him self and it is not because she/he chooses something in the morning that she/he has to feel constrained, limited in her/his natural curiosity. Because I think that is where the foundations of true learning lay. In feeling some sort of curiosity and go searching for an answer (Patrícia #1).

The areas were well resourced with materials carefully chosen according to specified criteria: quality materials bought in specialised shops (for arts, games, maths, books, lab) different and varied papers (shapes and sizes); recycled materials brought from home (supermarket fliers, food containers, stones, leaves, etc); materials children produce (books, dictionaries, photos files; science experiments files; puzzles, games); real materials such as staplers, paper clips, punches, scales, volume scales, graduated containers, magnifier. They included also the children's products, particularly project

documentation which could be revisited by the children, nurturing and recording the group memory (Vasconcelos, 1995) and motivating for new projects.

In September the classroom displays were empty, holding only the piloting tools in the multipurpose area. It was a time for a new beginning with a renovated community and the empty walls waiting for the products of the children's activities. Throughout the year, the products of this active community filled up the wall displays or were suspended from 'washing lines crossing the upper part of the classroom, clearly inviting the children to engage and produce such beautiful types of work (picture 5.2.).

Picture 5.2. Magnólia classroom overview

The Magnólia crèche still used the Freinet printing press, which was one of the most charismatic tools of the MEM practices. Replacing the printing press with the computer had been a slow process met with some resistance, and seemed to constrain the full adoption of the computer in the classroom. The computer was limited in capacity, had little software available and the ergonomics of the chairs did not encourage children to sustain their involvement.

The time routine in Magnólia

The Magnólia crèche was open for 10 hours each day (8:30am to 6:30pm). Within this time, the group and Patrícia worked together for six hours.

Patrícia arrived at 9.00am bringing the group from the gym into the classroom. As children continued to arrive with parents they marked their presence on the 'Attendance Chart', changed the 'Calendar', and some started planning on the 'Activities Chart'.

Patrícia talked with the parents, started to prepare the piloting tools for MCM and supported children marking on the 'Attendance Chart'. Some children told her about things that happened at home and she wrote those down in a "text" which children illustrated later. Children talked with each other, sharing home experiences, discussing the date and sometimes they started to envisage plans for the day. Many of these conversations were around time concepts related with the different piloting tools and the plans children started to make. The MCM started around 9.30am and ran for approximately 25 minutes (see chapter 6). After the MCM children went on into the different areas carrying on their plans individually or in small groups (see chapter 7). At approximately 11.00am Rosa brought some fruit and children gathered together in the carpet area to eat. Patrícia went out to the staff refectory to have a coffee break with other teachers. After the fruit break children went to the playground until Patrícia came back for Communication Time or other collective activities in the carpet area (see chapter 8).

On Thursday mornings (10.00-11.00am) they had music sessions with a music teacher. Patrícia participated actively in these sessions and she worked in cooperation with the music teacher so that the activities were integrated into the classroom's interests, projects and activities (that is working out the music component of theatre projects, learning songs associated with festivities). On Friday mornings, Patrícia went with pairs of children to the school library to borrow a book to take home.

Around noon, children washed their hands, and assigned children set up the table in the refectory where they had their lunch together with other children. Patrícia had her own lunch break, eating together with other teachers in the adults' refectory. At 1.00pm while Rosa had her lunch break some of the younger children went to have their nap in the three-year-olds' classroom. Older children (five and six years old) remained in the classroom engaging in free activities with Patrícia who used this period to document children's learning experiences (see chapter 7). At 2.00pm Patrícia went to the staff room for a meeting with other teachers and the head while the children stayed in the classroom with Rosa in free activities. The last part of the afternoon had a very inconsistent routine; the set routine included afternoon cultural activities: 'Team-games' on Mondays, 'PE' on Tuesdays, 'Clay' on Wednesdays, 'Story hour' on Thursdays and the Friday Council Meeting. During fieldwork the only consistent afternoon activity observed was the Friday Council Meeting. Such inconsistence was due to several

constraints: teamwork meetings lasting more than one hour, Patrícia leaving the school early to go to her Masters course, and lack of planning for afternoon activities.

After tea the group gathered in the multipurpose area for the Afternoon Council Meeting (see chapter 6). After the CM the children supported by Patrícia registered the individual activities on the 'Activities Chart' and they went to the playground to play until their parents came to pick them up. Parents usually entered the classroom and talked with Patrícia and the children about what was happening in the classroom (projects, children's work).

The weekly routine combined a very stable component – Council Meetings and Activities and Projects time – with quite unstable Communication Times and, particularly afternoon activities. The variations during the weekly routine were not negotiated with the children, which left them with less opportunity to actively participate in decisions. Children during such situations showed some confusion about what was going to happen and waited for Patrícia's decisions. Rosa found herself many times caring for the children during the afternoons with no focused activities and expressed her difficulty in keeping them engaged. In the children's interviews, most children stated that in the afternoons they would only play in the classroom and in the playground.

The fact that the Magnólia crèche included children from birth to six still impacted on the institutional organization and the daily routine of the children: for instance, it was during the naptime for young children that teachers had their meeting, leaving the older children 'in limbo' and engaging in unstructured activity from 1.00pm to 3.00pm.

Parents, the community and children's learning in Magnólia

Parent's participation in the Magnólia crèche was constructed mainly around their involvement in children's learning activities and projects (Patrícia #2). The open access to the classroom was an opportunity for parents to be involved and acquainted with the life of this community. The detailed documentation hanging in the classroom and corridors, and the piloting tools displayed, gave them opportunity to follow the processes and participation of individual children within the classroom.

Some Magnólia parents participated in some activities and projects in different ways: providing resources (for example: pumpkin; rabbit) or information needed for projects, coming to the classroom to teach something (what firemen do; how to do puppets),

sharing responsibilities in taking care of animals, providing support to solve problems (for example, setting up the computer and printer) or on some occasions being the audience for some of the children's projects' communications and performances.

The Curricular Project displayed near the classroom entrance informed the parents about what their children would be learning during their two years in the classroom. In the beginning of the year there was a meeting with parents which included the presentation of a play by the children and the project process developed to produce the play. In the end, Patrícia, the head and the parents, discussed the theme "learning through projects" and how different types of learning were integrated into projects.

At the end of each year there was an exhibition of children's products, where families could see what the children had learnt in different types of activities based on their own interests. Parents participated also in celebrations of meaningful days (child's birthday, Christmas, father's day).

Individual meetings with parents occurred at the request of Patrícia, the head, or the parent(s). In these meetings Patrícia shared information about the child's progress using the child 'individual books' (see planning and evaluation system section).

Contacts with the wider community were rare at the Magnólia classroom (Tables 5.3. and 5.4.)

Table 5.3. Outings at the Magnólia classroom

Date	Transport	Location	Purpose
25.03.04	Bus	Town	Dinosaurs museum
26.03.04	Bus	Nearby village	Watching a bees exhibitions
30.03.04	Bus	Local firemen headquarters	Visit a firemen headquarters and learn about their work

Table 5.4. Visits into the Magnólia classroom

Date	Visits to the classroom	Purpose
Nov 03	Dentist	Invited by the group to explain things about teeth and its hygiene included in a project
16.02.04	Nicole's mother	Brought some rabbits and offered one to the classroom
1.04.04	Frederico's mother	Teaching how to make papier-mâché puppets
3.03.04	Eva's parents	Teaching things about firemen's work related with a project

In Patrícia's view, outings had to be based on a real purpose. Despite her justifications for the poor contacts with the local community being grounded on security risk factors, lack of staff and transport, she also expressed a view of the local environment as poor in opportunities for children.

> We don't have a set day for outings. Because we believe that going out just for the sake of it is not worth doing. It is a risk situation. .... And also because we don't have much to see as it's only buildings and more buildings. When we go out we have a more elaborated purpose. For instance, going out to visit something related with projects or something we want to find out. (Patrícia #1)

Patrícia expressed the need for an *elaborated purpose* to go out and she did not consider the local community as a context where interesting questions or situations could arise. Although, in another interview, she assigned great importance to contacts with the community, showing some contradiction.

> It is extremely important because it is after all the environment where they live. And for them to feel that we have to take care of the environment where we are, where we live. (Patrícia #2)

In practice, there was not one outing around the school during the year. At times the school looked isolated inside its residential area, contradicting Patrícia's theoretical discourse and the MEM philosophy.

Other forms of engagement with the wider world included discussing issues that children heard about trough the media. In May, children discussed the war after looking at a newspaper report of a bomb attack in Pakistan, brought to the classroom by one girl (see chapter 8). Correspondence with the Amoreira classroom also provided encounters with realities other than those experienced directly by these children. Correspondence between classrooms is a traditional activity within the MEM model whereby children communicate with other groups of children, sharing their experiences and queries. Finally, many of the projects developed within Magnólia classroom engaged the children in contacts with the real world, mostly mediated by adults and books.

The planning and assessment system in Magnólia

The planning and assessment system in Magnólia classroom had its central focus on the ongoing learning process and served as a regulating system that promoted the generation of new learning and activities based on children's knowledge, experiences and interests.

Assessment is in this process integrated in the actual educational process in cooperation with children (Magnólia curricular project).

The Magnólia crèche, as well as the whole institution, had continuous and consistent planning and assessment practices, which supported at the background Patrícia's work with the group (Table 5.5.).

Table 5.5. Magnólia's planning and evaluation system

	Practices and Situations	Participants	Tools
Institutional	Devising common documents and tools	E. D. director, Teachers and heads from all crèches, psychologist.	• Classroom curricular project • Knowing/doing Assessment inventory
	Daily Team meetings: documenting children's learning; discussing problems; discussing classroom practices	Head, Magnólia teachers	• Children's products, documentation records • Teachers' notes
	Evaluate and plan general run of crèche in weekly team meetings	Head, Magnólia teachers	
	In-service training scheme: sharing and discussing practices between different crèches	DED, heads and teachers from all crèches	• Piloting tools • Children's products, documentation records
	Exhibitions	Head and teachers with children's participation	• Children's products, documentation records
Classroom	Council meetings: planning and assessment group activities and attitudes	Teacher and children	• Diary • Daily plan
	Individual planning and assessment in Activities Chart	Individual children with teacher support	• Activities chart
	Communications of projects and other activities	Teacher and children; other adults	• Children's products
	Supporting production processes in Activities &Projects time	Children with Teacher support	• Projects list • Projects documentation • Children's products • Classroom materials
	Constructing Individual books	Teacher with individual children	• Individual books • "knowing/doing assessment inventory"
	Responsibilities	Teacher with children participation	• Responsibilities chart • Responsibilities record
	Teacher individual evaluation and planning notes	Teacher	• Teacher's notebook • Classroom curricular project

At the institutional level

The whole institution devised some common documents based on the CG and the MEM pedagogical model, focusing on the children's learning and classroom curricular experiences. The Classroom Curriculum Project was a document with "*the educational goals we assume for parents and the competencies that we think necessary for children to acquire before leaving for primary school*" (Patrícia #4). Based on this general document each teacher had a "*Classroom Individual Plan*". This document started with a statement of Patrícia's intentions:

> I intend, together with the group of children under my responsibility, to build the learning opportunities necessary for knowledge of the world, in different areas: language; mathematics; experiments within physics, chemistry, biology and social sciences; and expressive arts in their different media.
>
> It is also my purpose to build with the group of children the material and social conditions necessary to make such learning happen, namely through their involvement in managing spaces and routines, piloting tools, responsibilities and rules which living in a group require, and which constitute the unique condition for citizenship and democratic values. (Magnólia classroom individual plan)

In these initial paragraphs of Patrícia's document she expressed her main aims associated with children's learning: learning within different areas of knowledge and building up a democratic environment where children learn the organization and values of a democratic society. The document continued by presenting each area of knowledge: specific aims, how they will be achieved, and list of activities. Patrícia used the "Classroom Individual Plan" to reflect on her practices and to adjust the implementation of the curriculum (Patrícia #3).

The "Knowing/doing assessment inventory" registered a comprehensive list of children's competencies associated with different areas of learning. Each competency was evaluated at two levels - "I can do it on my own" "I can do it with help" – where Patrícia wrote the date based on an evaluation with the child. The inventory included items in different areas of knowledge: personal and social development (32 items); language and literacy (25); arts (13); maths (38).

The intense and continuous teamwork and staff development scheme previously described provided different forums for planning and assessment. The end of the year exhibition constituted the final evaluation activity. Selecting children's products and

organising the exhibition was a process which, according to Patrícia, promoted both teachers and children's awareness of the children's learning during the year. This relates to the externalisation of children's learning referred to by Bruner as the production of *oeuvres* which "rescues cognitive activity from implicitness, making it more public, negotiable, and solidary" (Bruner, 1996:24). Moreover, making learning visible to the community, celebrates common achievements and contributes to reify its common endeavour around children's learning, building up the community identity as a community of learning (Bruner, 1996).

At the classroom level

Children's participation in planning and assessment will be presented in the next chapters (6, 7 and 8).

The children's individual books were compiled throughout the year by selecting some samples of their work and illustrating some of the competencies referred in the 'Knowing/doing assessment inventory'. This process allowed both Patrícia and the child to become more aware of individual learning. Next to the children's work Patrícia added some comments they had made (e.g. "I draw an aeroplane and the route it made in the air; it went from here to America" J September 03) and wrote down the competencies related with the different curriculum areas (e.g. Maths: representing trajectories and spaces, using arrows to represent direction). This participatory process was frequently an opportunity for celebrating achievements.

Patrícia used a notebook to register children's observations and interactions so that she could reflect on children's learning connected with the curriculum and think about how she might support the children's progress (Patrícia #2). These notes allowed her to include in the records and documentation the children's interactions during the learning experiences (Appendix 10 'Magnólia documentation').

5.3. Summary of two communities applying the MEM model

This chapter has presented the two classroom contexts where the MEM model has been investigated. They have contrasting school characteristics in terms of space and resources, and school culture. Carolina worked in an isolated school with limited teamwork, where she introduced the MEM model for the first time, changing the dynamics of the nursery school in several aspects (educational focus, teacher/child relationship). She centred her work with the group of children, involving them in reorganizing their learning environment and providing opportunities to link with the community. Patrícia worked within a strong institutional culture with sustained practices of staff development and a set of common educational goals and commitment in applying the MEM model. Her classroom was an established community of practice, centred on developing projects from children's interests. The institution culture of "doing better" challenged Patrícia's practice producing in her mixed feelings: proud to belong to such a quality team where she learned through reflecting about practices, and sometimes feeling stretched and discouraged by high expectations of the day-centre leadership.

Both classrooms follow the structural organization of the MEM model (space and materials, time routine, planning and assessment system based on formative assessment) with some limitations due in part to institutional factors: poor resources in Amoreira and some inconsistent routines in Magnólia.

Chapters 6-8 analyse the learning culture and the learning processes that take place as children and adults interact in these two classrooms. As mentioned in chapter 4 specific times are given particular importance in the MEM model, and those considered most relevant to children's learning to learn were thus especially analysed: Council Meetings (CM) in chapter 6, Activities and Projects (A&P) in chapter 7 and Communication time (CT) in chapter 8. Each of these activities is analysed and presented in each of the two contexts and then followed by a summary. The presentation of the analysis of each MEM activity type follows a common structure:

1. What did children and adults do during this type of activities?
2. How did participants perceive this activity and their main goals?
3. Roles and opportunities for participation.
4. Mediated intera-ction: material tools and interactions.

Chapter 6 Children and adults inter-acting in Council Meetings

Council meetings were recorded on videos (sometimes audio) throughout the year: Monday CM (7 in Amoreira and 8 in Magnólia) and the Friday CM (9 + 1 audio in Amoreira and 7 + 2 audio in Magnólia). Two videos (one at the beginning and one at the end of the year) of both MCM and FCM were fully transcribed and analysed. These analyses were further cross-validated using the summaries produced for the remaining videos as well as field notes. These analyses of CM include the daily CMs as its main components are also part of the Monday and Friday CMs.

The participants' views of the CM draw from three interviews with the teachers (#1, #2, and #4), and the children's interview on "routine, piloting tools and group situations". In this interview the specific data collected with relation to CM was gained by using three photographs: the Council Meeting; 'Diary'; Daily Plan in Magnólia and the use of the 'I want to show, tell and write' list in Amoreira.

Finally, this section includes the analysis of the piloting tools used during the CM in both classrooms.

6.1. CM at the Amoreira Classroom

The Amoreira children gathered at the centre of the classroom for their CM, sitting with Carolina around a group of tables to talk, discuss and engage in long conversations.

Picture 6.1. Council Meeting at Amoreira

6.1.1. What did children and teachers do during Amoreira CMs?

MCM at Amoreira

The analysis of the videos and field notes showed that the Amoreira Classroom used the MCM for different purposes (table 6.1).

Table 6.1. Time distribution of MCM at Amoreira

Recorded Amoreira MCM	**1**	**2***	**3**	**4**	**5**	**6****	**7**
Showing, telling and writing	19	11:43	60	37	25	21	42
Responsibilities	3	6:20	3	4	7	4	3
Text of the week	12	-	-	-	-	-	-
Counting the days children missed school in a month	-	-	-	-	-	14	-
Starting a new attendance chart	-	-	-	-	-	9	-
Planning the week and the day	15	14	4	11	11	23	7
Total video (minutes)	**57**	**52 (32+20)**	**67**	**60**	**44**	**87**	**53**
Number of children	14	9	15	12	9	13	12

* this video included both Monday CM and Friday CM5

** the start of a new month required additional activities; this CM was split into two sections with a break for a snack and outdoors play

The MCM at Amoreira is a lengthy activity, lasting around 60 minutes per session. With a few exceptions the MCM followed a consistent structure of actions, aimed at different purposes:

Showing, telling and writing (always)
Assigning week responsibilities (always)
Choosing the text of the week (sometimes)
Counting the days children missed school in a month (once a month)
Starting a new attendance chart (once a month)
Planning the week and the day (always):
Reading the last week's 'Diary' ('We did' and 'We want')
Filling in the 'We want' column of the new 'Diary'
Deciding what to do in the day ahead

Duration: 60 minutes in average ranging from 44 to 87
Number of children: 13 in average ranging from 9 to 15

Not all children came on time, so MCMs usually started with few children and as new children arrived, they immediately joined in the conversations. Most of the MCM time

(11<31 min<60) was spent with "Showing, telling and writing" actions. Only at the end of the meeting did they plan the day and the week ahead (4<12min<23). These different actions will be fully analysed in the section 'Mediated interaction' below. The fact that the group of children was relatively small (13 on average) probably contributed to what appeared to be a close and intimate atmosphere fostering interaction in the group.

Assigning responsibilities

At the Amoreira classroom, the children's responsibilities were: marking down the absent children on the attendance chart; assuming the presidency; delivering milk packs at the afternoon snack time; distributing the fluoride pills; watering the plants; updating the calendar. Every Monday the children, together with Carolina, evaluated how well each child had accomplished his/her responsibilities and then re-assigned new responsibilities using the rota system on the responsibilities chart. The children took these tasks seriously, and view them as something that ought to be accomplished or else it would hamper the group's life (*"if not it would be a mess!"* children's interviews). Carolina stressed social/shared responsibility and accountability, reinforcing the concept of community building and the children's sense of belonging, strengthening the centrality of the group in the MEM model.

Evaluation of the attendance chart and starting of a new one

At the beginning of each month, the group evaluated the days each child was at school the previous month, and then started a new attendance chart. Everyone in the classroom had their names on the attendance chart (Carolina, Margarida, Ms Aldina and myself) and had therefore to be accountable to the group. Highlighting the absence of each member of the group was important to reinforce the sense of community.

Children's participation in designing each month's attendance chart was an opportunity to understand concepts of number and time (weekdays, weekends) while becoming involved in planning significant events for the community (birthdays, visits, outings). In the children's interviews, all the children could identify the meaning of each of the conventions used to record information on the attendance chart. When they were shown a photograph showing an old attendance chart (two months old at the time of the interview) they were able to recall what they did on some of the special days (*"here we went to the swimming pool"*).

Afternoon CM at Amoreira

At the end of the day, the group got together around the tables, sometimes while having their tea. This meeting was always chaired by Carolina, who started by reading the 'We did' column of the 'Diary'; sometimes also the columns 'We liked' or 'We didn't like' columns were filled.

Only in 12 out of 30 days of fieldwork did afternoon CMs take place (Fridays were an exception, as all FCM took place as planned). This happened for different reasons: because an afternoon activity lasted until teatime; due to outings on Tuesday afternoons; or because of celebrations (birthdays, mothers' day) requiring flexibility in the routine. On these occasions, Carolina sometimes informally reviewed what they had to do the next day as they prepared to leave.

FCM at Amoreira

To end the weekly cycle of classroom life, at the FCM the group evaluated the week by going through the 'Diary' (Table 6.2.).

Table 6.2. Time distribution of FCM at Amoreira

Recorded Amoreira FCM	**FCM audio**	**FCM 1**	**FCM 2***	**FCM 3**	**FCM 4**	**FCM 5****	**FCM 6**	**FCM 7**	**FCM 8**	**FCM 9**
Introduction	5	10:30	2:20	-	2:40		6		-	
Evaluating responsibilities	-	-	8	4	-	6:20 a)	-			
We liked	20	7	8	3	9	3:22	9:30	4:30	10	8
We didn't like		13	14:40	10	27	15	16+15	22	25	15
We did	-	-	-	2:15	1:30	-	-	-	4	-
We want	-	-	2	-	-		-	-	-	-
Total video	**25**	**31**	**34**	**22**	**40**	**52 (32+20)**	**50**	**30**	**40**	**32**
Number of children	15	15	15	7	12	9	14	10	14	12

* this meeting was carried out on Friday morning and included 8:00 minutes of assigning new responsibilities and evaluating how that week's responsibilities were undertaken by the children.
** this meeting was part of the Monday CM2 as it could not be held on Friday
a) evaluating responsibilities was done at the same time as assigning the new ones.

The FCM followed a consistent structure of activities and actions although not all of them were carried out at all the meetings:

Introduction
Evaluating responsibilities (sometimes)
Reading the 'Diary':
We liked (always)
We didn't like (always)
We did (sometimes)
We want (occasionally)

Length of time: 22 < 36 min < 52
Number of Children: 7 < 13 < 15

6.1.2. How did participants of CMs perceive this activity and their main goals?

Teacher's perceptions of CMs

For Carolina, CMs were among the most important activities within the classroom. In her view, CMs' main goals were: creating a community where relationships are developed and individuals are valued by themselves and by their contribution to the diversity of the group; discussing issues about living in a society and being part of a community (classroom, city, world); and to plan and evaluate the life of the community.

> We reserve the morning period, to welcome each child. I always try to see that every one feels that he/she is arriving at a familiar and pleasant place. Besides this individual welcoming, we rapidly move on into a collective welcome where we share with the group the things that each child brings from home. We may write down what they say, but we then move to talk and plan all together the day ahead. In this planning of the day, there are proposals that come from home, say children bring in an idea or item. We also use the 'We want' column on the 'Diary' which is always read with the children to help them remember what has been previously agreed among all and needs to be finished. (Carolina #1)

The first goal was mainly achieved at the MCM when each child was given the opportunity to display and talk about something brought from his/her home. Showing the children how individual experiences enrich the community was expected to facilitate their acceptance within the group and reinforce their sense of belonging; it was used also as a means to ensure that diversity was embraced and participation fostered. Watkins points out. "In classrooms where a sense of community is built, difference is not viewed as a problem and greater diversity of people and contributions is embraced" (2005b:53).

The second goal, to discuss issues about living in a society and being part of a community was achieved during FCMs through a discussion of children's behaviours

during the week which had been written down during the week on the 'We liked' and 'We didn't like' columns of the 'Diary'.

> On Fridays it is the Council day. We read the 'Diary', and we talk about things that happened ... good and bad, we try to create rules for being in the classroom, living in a group, what is it to respect others and to help, we talk a bit around this... (Carolina #1)

These conversations about behaviours and pro-social attitudes provided the opportunity for learning how to live in society and discussing values and social rules; actually, the purpose of CM that Carolina finds the most interesting.

Recognising that this was the most challenging and difficult part of applying the MEM model, Carolina was aware of the complexity of holding CMs with such young children but she was confident about the children's ability to learn and expressed her pleasure in overcoming problems with them (Carolina #1).

The third goal of a CM, in Carolina's view, was to plan and to evaluate as a group, a process she felt as especially important in learning to learn, as it allowed the children to become conscious of what was being done, thus introducing a semiotic activity.

> What goes on is a process of clarification/planning and evaluation that is very important for them through which they learn how to manage things.

.... About the importance of writing on the 'Diary' Carolina says:

> Sometimes we end up the day and "what have you been doing?" and "nothing, they have been playing". By disentangling all of this we start "to call things by their names" so that they become conscious of what they actually did. (Carolina #1)

Carolina stressed the importance of children becoming conscious of the processes and the goals of their activities, and helping them to move away from the general conception of "just playing" in order to go into a more detailed description of different activities and social practices that correspond to different areas of knowledge or literacies. When she mentioned "calling things by their names" she meant the "semiotic practices – the ways of making meaning – that are valued in the culture" (Wells, 1999:242) supporting a process of change in participation from the informal exploratory play into learning emergent literacies (van Oers, 1999a).

Children's perceptions of CM

At the forefront of children's perceptions of the CMs' goals were two strong ideas: *to show, tell and write* and *to read the 'Diary', talk and solve problems*; planning and evaluating was also mentioned as something done at CMs but not as strongly as the previous two. Throughout the interviews, children would relate a CM either to the daily MCM or, more often to the FCM.

Showing, telling and writing

All of the children (except Td (5:3) and Js (5:3) who used to come late) perceived the MCM as the time for showing each other things from home or telling the others about their own experiences.

> **Mn (5:0)** And then we write our name and its time to see things…
>
> **Fp (3:8)** To tell things … or say 'texts' or to… to get things from home, … balls or toys from home…

When shown the "I want to show, tell or write" photo children stated that the purpose of this tool was to give them the opportunity to tell or show something to others and for the presidents to 'give the floor' to other children so that they could speak.

Reading the 'Diary' and solving problems

Prompted by a photograph of a CM, children gave a more general idea about how they saw the purpose of these meetings. Reading and writing on the 'Diary', to deal with problems, and how to solve them in the meeting were the ideas that came across most strongly in children's interviews.

> **Fp (3:8)** The meeting!
>
> **R** Yes, the meetings… what are they for?
>
> **Fp (3:8)** It is to see ... to see.... It is to write in 'Diary' when others hit
>
> **R** uhum,… what for?
>
> **Fp (3:8)** It's to forgive the other.

> **Mr (5:10)** And then, when it is meeting day, we....eee … the presidents go and get the 'Diary'..... and then, ... We're going to..... to solve everything!
>
> **R** How do you solve things, Mr?

Mr (5:10) It is like that: we have to find a way so that we will never hit children anymore.

R .... And that meeting what is it called? Is it the Council Meeting?

Dg (5:8) The solving meeting!

The idea that the purpose of the meetings is to read the 'Diary' and solve problems together was overwhelmingly expressed by children commenting on the 'Diary' photograph.

R ... what is the purpose of the 'Diary'?

Mn (5:0) It is to help... help children... once T cried because of Fp.... "Fp hit me Carolina!" and Carolina said "T go and write in the 'Diary'. They (the presidents) are going to get it and then you will see". And she wrote.

R and do you think it helped T?

Mn (5:0) Yes, it helped and we solved it.

R She was not upset anymore?

L (4:9) No, now she is not, when we write in the 'Diary' we are not sad...

The Amoreira children displayed a positive opinion about the meetings, recognising that it helps them to deal with conflicts in the classroom.

Only the 'We liked' column seemed to not attract much importance; only three pairs of children (out of eight) mentioned that they ever wrote in this column, although they all recognised it in the 'Diary' and associated it with friendly attitudes.

Dt (4:5) Here it is for children who liked and gave others a hug....

Planning and evaluating

When asked about the daily routine, only two pairs mentioned that they planned their day at the MCM, although, other children mentioned planning and evaluating as activities performed at these meetings when asked to comment on the CM photograph.

Ad (6:1) and listens to Carolina reading the 'Diary'... "What we want to do ... in the 'Diary' which Carolina reads and we listen in order to see who is going to do that, that or that..."

Shown the 'Diary' photo most children (six pairs) mentioned that the 'We did' and 'We want' columns are meant "to see what we've done and what we want to do". From the children's point of view it is important to know what they are doing and it helps them not to forget. One child said that it is *"To work hard!" (Ag 4:5)* which picked up the classroom discourse of "doing a lot of things", and "practising to learn".

From the analysis of the participants' views of CM it became clear that all participants shared the view that CMs were to talk about individual interests and problems, creating a community where relationships are developed and individuals are valued and enrich the diversity of the group. To plan and evaluate the activities of the community were goals identified by the teacher and the children, although without such prominence as the former ones. While the children saw this as a way of being in control of decisions about classroom activities, the teacher understood its potential for children to learn how to learn as children engage in semiotic activity (van Oers, 1999a) and joint regulation of learning (Rogoff, Turkanis and Bartlett, 2001; Watkins, 2005b) (see Appendix 11 'Summaries of teachers' and children's views of activities' 1).

6.1.3. The roles and opportunities for participation

The chairs – the CMs at Amoreira were chaired by the two presidents of the week (mixed age pairs) with their teacher's support, and conducted according to some explicit rules: giving the floor, following either the 'I want to show, tell or write' list (MCM) or the 'Diary' entries in the 'We liked' and 'We didn't like' columns (FCM); paying attention to those who wanted to speak or comment next, while ensuring that everybody was involved and not disturbing the smooth running of the meeting, following the rules for participation.

Participants – The participants who had their names on the 'I want to show, tell or write' list or on the 'Diary' 'We liked' and 'We didn't like' columns, introduced the issues to the group trying to be explicit enough so that others understood them and were able to discuss things. The other participants' roles were to contribute to the group discussion or conversation, to help dealing with and solving problems, to offer their individual points of view, and to participate in planning and evaluating the day's or week's activities.

The rolling rota scheme for the responsibility of being a president gave every child an equal opportunity to engage in the chair's role and learn how to do it.

The analysis of the 'I want to show, tell or write' list (Appendix 12 'Patterns of participation from analysis of CM piloting tools' 1) and field notes showed that most children used this time of the MCM to speak with the group. Only the children who came late to school or were absent for long periods did not assume this role so often. Younger children and the more outspoken children tended to use this list more often than the older ones. However all of them made good use of this tool. The list, according to Carolina, helped the ones who were not able to get the floor such as H who was very young (3:0) and could not as yet make use of language very effectively, and V (5:8) who had a speech problem, ensuring they had opportunity to talk to the group (20.03.04 conversations with Carolina).

The analysis of the classroom diaries (Appendix 12 'Patterns of participation from analysis of CM piloting tools' 2) showed that only three of the children never wrote in either the 'We liked' or the 'We didn't like' column. Both younger and older children used the 'Diary' frequently.

The different roles at Amoreira CMs allowed for a share of power between Carolina and the children.

6.1.4. Mediated intera-ction at Amoreira' CMs

At the CMs the children used language to interact, to share ideas, to co-construct meanings, to negotiate, to reflect, to plan and make decisions. And, as well as being a language-based activity, the CMs featured as central activities the use of writing.

The piloting tools and children's texts

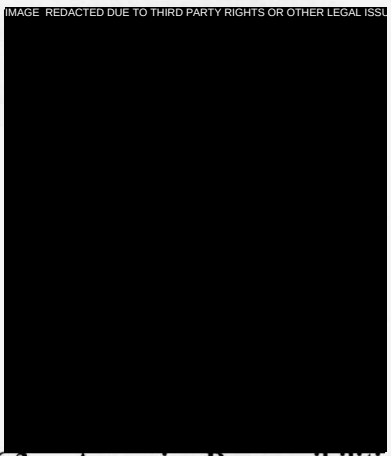
Beyond the 'I want to Show, tell or write' list and the Classroom 'Diary', occasionally, the group used other tools displayed in the classroom to support specific processes ('Afternoon Plan' for planning the day and the week; 'Attendance Chart' and 'Calendar' to plan the day and the week; records or documentation of outings to evaluate). *Children's texts*, produced during the MCM were also written tools which mediated the processes that the group experienced during these activities.

"I want to Show, to Tell or to write"

Picture 6.2. 'I want to show, tell or write' list

This tool was Introduced in January to regulate children's participation in "showing telling or writing" at the MCM. The individual names written each day show how this group was a community of individuals (different names, handwriting and colours). The chart gave children a sense of order which was transparent to all and on which they could rely. It also supported the chairs to run the meetings without arbitrary decisions about whom they should give the floor to. The columns framed the weekday timetable, and the days in which the community was active.

Responsibilities chart



Picture 6.3. Amoreira Responsibilities Chart

The use of typed writing combined with drawing and scribbles helped children to understand what was written on each tag and also to understand the use of writing. The

system of having fixed pairs (older and younger children) promoted collaboration and peer-tutoring and the development of deeper relationships. The stability of the rota system also ensured transparency, equal opportunities, and reified the responsibility of each one in carrying on these tasks despite individual choices, likes or dislikes. The working culture was also being promoted by the use of the expression "to rest" for children who did not have assigned tasks during the week.

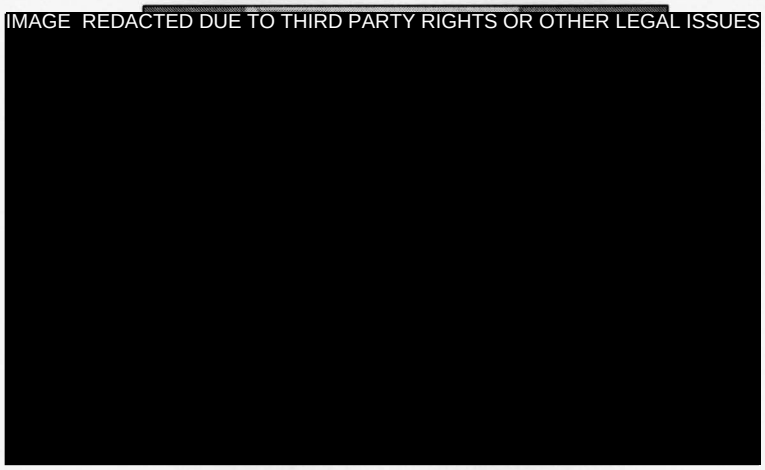
Classroom 'Diary'

Picture 6.4. The Amoreira 'Diary'

Although mainly written, the 'Diary' was illustrated by the presidents as well as annotated with their ticks and circles. Children wrote their names in the 'Diary' and sometimes other children's names which reified the individual issues they wanted to bring to the group. The four columns structured the evaluation of the week, separating attitudes or behaviours from activities and linking evaluation with planning of activities. Carolina used different colours to differentiate each sentence.

Attendance chart

Picture 6.5. The Amoreira Attendance Chart

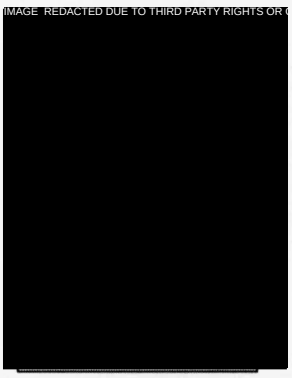


The Attendance chart represented the community participants with individual names written by each one and in different colours (columns on the left) and the timetable of this community activity (school days). This tool also acted as a reminder of special events and celebrations. Each day the absent children were counted and registered. Highlighting the participants' missing days reinforced the importance of participants' commitment towards the community.

Children's individual texts

Children's texts combined Carolina's writing with the children's drawings and writing of known words. Children began to write some words on their own or with the help of their more experienced peers. Here, drawing had a communication function: children were invited to represent the content of their own messages.

C (4:3) illustrated the text and at the same time explored the letters forms by colouring some of them. Mn (5:0) who knew how to write Football fetched her sports book and offered to write in C's text. (Appendix 13 'Transcripts and vignettes from Amoreira CM' 2)



Picture 6.6. Amoreira child's text

Using Language towards goals at the Amoreira classroom CM

Showing, telling and writing

The interaction during showing telling and/or writing followed a common script of actions structured by the roles of the participants and the rules for participation explicitly and implicitly transmitted to the group throughout the year. The children learned this script and the rules, which together with their understanding of the purpose of this action, promoted full participation.

1) Showing / telling and describing explaining; 2) Questioning, commenting and extending 3) Discussing 4) Ideas for planning 5) Reflecting on language and summarising for writing a text

Showing, telling and writing time, started with the first child giving his/her individual account. Here, the child used language to express an idea, to explain and describe an event, or to support the presentation of some toy or material brought from home. Usually during this part of the presentation Carolina helped the child to clarify his/her message and to expand the narrative. She used questioning (eliciting more information, confirmation / clarification of meanings) and sometimes rephrased the child's language, modelling or simply using prompts (uhum, and... so, was it?) to invite the child to expand the narrative. Quickly this one-to-one dialogue turned into a group interaction when Carolina either invited the other children to comment or encouraged the child to turn to the group.

1	**L (4:6)**	... I ate two oranges (hardly understandable)
2	**Teacher**	You ate two oranges? Uhum...
3	**L (4:6)**	And I also drank milk.... And then went to the toilet and got sick!
4	**Teacher**	you vomited at the toilet? Ah! (astonished) Did you hear what L said?
5	**Jr (5:11)**	Oh, once I got sick also, teacher!

..... full episode lasts 36 turns (MCM episode2 Jan 04)

The other children's engagement in the conversation through commenting, arguing (this cannot happen as...) or questioning (what kind of motorbike you have?), often helped the child to extend his/her narrative. In this episode, the conversation included 36 turns

and the group related to L's account with their common experiences: some children discussed eating citrus fruit with milk at snack time. In most of the "Showing, Telling and Writing" episodes (36 out of 47) other children's contributions were explicitly encouraged by Carolina and later in the year by the children chairing the meetings, who would also ask other children if they wanted to comment or add something.

Very young children had the opportunity to express their views of the world, shared their own experiences and points of view with others, and learn many things with their peers and teacher, which jointly provided a ZPD for the group. The analysis of the themes discussed in "showing, telling and writing" time in this small community revealed the richness of these conversations (Appendix 13 'Transcripts and vignettes from Amoreira CM' 1). What was especially notable about these discussions was their sustained nature. Poveda (2001) supports the view that when children are invited to discuss real problems they become more involved in group conversations. In MCM7, Ag told 'a text' about going on a motorbike with her father and little brother. The episode had 63 turns and was followed by Mn also telling about her father going on his motorbike and being caught by the police. This episode had 238 turns and was participated in by all but two children in the group. During these two episodes children discussed safety issues as well as moral issues concerning compliance to rules.

> The conversation was focusing on running away from the police and having to use helmets because the police could catch us.
>
> **Teacher** Look! And do we have to use helmets because of the police?
>
> **Jr (6:3)** No!
>
> **Teacher** Why then do we have to use helmets?
>
> **Jr (6:3)** Because it is forbidden, ... and it is also very dangerous!

Young children's early moral reasoning is often bound by rules and punishments, showing an heteronymous moral thinking (Piaget, 1932-1997). Yet at the CM dialogues children were encouraged to consciously confront their positions with those of others, considering different points of view on the same subject (Pramling, 1996).

From these conversations often emerged ideas for new activities in the classroom either proposed by Carolina or by the children (for example, going to Dg's house to see the newborn piglets; plan a *bayblade* championship; using story characters to set up a theatre; making jewellery for the pretend play area). As a result, the activities in the

classroom became deeply related to the children's experiences, the group benefited from the diversity of each of its members, and each child was valued by the community.

About half of the "showing, telling and writing" episodes were used by the children to "say or write a text". At the beginning of the year, when children were reporting something to the group, Carolina asked *"do you want me to write it down"?* and soon the children themselves started to say *"I have a text"* when they wanted their accounts to be written down and then illustrated. This practice, part of the MEM culture (from Freinet's free text), was of high significance for children: through writing, their own stories could be talked about, reflected on, and remain to be revisited and communicated to others later on when displayed in the classroom (Appendix 13 'Transcripts and vignettes from Amoreira CM' 2).

The children learned about writing and, as the year went by, they engaged in collaborative reflection about syntactic menus and styles, the use of language and letters, and how to synthesise ideas in order to write them down, in a joint metalearning process (Watkins, 2001) in relation to language and writing.

> Dn tells 'a text'. The children tell Dn (who has been at home) that they can write some words in their texts using the words' files from the office area. They also have been looking at all the texts and found out that most of them were about 'my mother', and ' my father'. They agreed that they would try to 'say' different texts. Not starting with 'my mother'. Carolina invites the group to let Dn say 'my mother' acknowledging the need to be flexible about rules when one child is facing them for the first time. (Amoreira March)

The children engaged in joint reflection of each other's texts and became critical listeners. It is important to note Carolina's sensitivity to Dn's point of view and her (possible) sense of inadequacy listening to the others comments: in the end Dn was acknowledged as an author with the right to decide what to write and how to express it.

As the year progressed the children became aware of their own learning progress in respect to writing, (*"Don't write my name! I can do it!" Fp(3:6) 29.03.04*). By involving different children in supporting each other's writing and looking for the resources in the classroom to support it, the children developed their resourcefulness, as they became aware of the resources available to them in order to accomplish what they wanted (Claxton, 1999; 2002).

Evaluating and planning the day or the week

In planning the week or/and the day Carolina involved the children in thinking about what they wanted to do and also about what had to be done either because something needed to be finished or because there was some kind of external demand (preparing celebrations, writing a letter to acknowledge the local authorities for inviting them to the swimming pool), combining individual interests with personal and social responsibility. Evaluating and planning the week/day followed the structure:

1) Read 'We want' column and tick what was accomplished
2) Revisit some of last weeks activities (recall, commenting)
3) Decisions about ongoing activities and new ones
4) Write on the 'We want' column what is going to be done
5) Decisions about when and who is going to do it

Carolina read the previous week's 'Diary' to remind of some of the previous processes and to make clear what was left to be done. Occasionally, the attendance chart was used to check out for special days as well as the afternoon's activities plan to see when particular group activities (cooking, stories and books, gymnastics, visits) ought to be made.

> They read the 'We want' column from last week's 'Diary' and they evaluate what they did, what they still have to continue: "measuring the children's height". Children compare and comment on the patterns they used to decorate their strips, after which they count how many strips they have already and they come to the conclusion that only two children did not finish their strips but they cannot say who they where. They collectively read all the children's names from their nametags to check who is still missing. Carolina says that afterwards they have to think about a way of organising all the strips. She proposes to put them in order from the shortest to the tallest. (MCM2 Jan 04)

In the above vignette the group revisited the height strip activity. Some children were aware of the mathematical challenge (doing a pattern) Carolina had invited them to do. They also engaged in finding the missing strips by doing one-to-one correlations using the nametags and finally displayed the strips in order. The process of revisiting past activities promoted reflection about the learning processes (Sylva, 1992) which Epstein refers to as remembering with analysis (Epstein, 2003), going beyond recalling what they did and ticking the 'Diary'. This process happened in all recordings except at MCM4.

Planning involved making rational decisions. Carolina invited the children to manage their own planning, moving away from immediate and impulsive choices into more reflective, rational and efficient planning, which included reflection on the goals, strategies and materials, feelings and enthusiasm, and social and contextual conditions: a type of reflection called metalearning (Watkins, 2001:1).

Teacher ... The babies Project is already out of date... (nobody comments) and the Euro one.... Are you working?

Dg (5:8) We need the computer.

Teacher First we need to think about the questions that you want to do for the interviews so that we can then write them in the computer.

L (4:9) (Shows interest)

Teacher You are in the Euro 2004 and in the Babies one... and then you will not work in either one or the other.

L (4:9) The babies' one. .

(Monday CM April 04)

Deciding was not always easy for the children particularly when they had to negotiate their initial choices. Carolina elicited rationales, but sometimes this was not enough. For example, when allowed free choice to form groups to be responsible for specific tasks (taking down Christmas decorations – MCM Jan 04; present for fathers' day – MCM Mar04), the children insisted on being in a few groups only, leaving most other tasks unfulfilled. To support negotiations, Carolina used the blackboard to list the different groups or wrote down in a piece of paper the names of the children: this tool helped the children to negotiate, as they were able to actually see the uneven distribution and agreed more easily to change their choices in order to have more balanced groups. Free choice was combined with responsibility to achieve common goals.

Reading the 'Diary'

Reading the 'Diary' and discussing what they didn't like or what they liked was introduced by Carolina in the classroom. The children learned to make sense of the activity and to understand its purpose through a continuous experience throughout the year. At the first FCM, despite Carolina's invitations to read the 'Diary', explaining what its purpose was, it was only when she started to talk about a real incident that the children started to be involved.

Reading the 'We didn't like' column

Carolina introduced a set of rules for discussing these incidents that became consistent throughout the year and which the children learned to master.

1) Teacher reads one entry 2) Chairs give the floor to the person who wrote that entry to explain what happened and why he/she did not like it; 3) Chairs give the floor to the person who is named to explain what happened and why she/he did it; 4) Other children tell what they've seen and discuss, ask questions, further clarifying the incident; 5) Solving the problem - Question how is it going to be solved and ideas for preventing it in the future; 6) Chairs tick the entry or put a circle if it was not discussed

Solving the problems that arose in their everyday classroom interactions was not an easy process and Carolina was aware the children needed help in different aspects: learning to talk about something they did wrong; learning to listen and taking into account what others said; taking into account intentions, contextual variables, and different states of minds; expressing one's ideas before acting; dealing with criticism and dealing with one's emotions. Carolina did not rush solutions or pretended that problems were solved when they were not. Each of these episodes lasted between: 35 seconds and 11:31 minutes with a mean time of 5:48 minutes. She helped the children to go on talking about their feelings, their versions of the event, motivations and intentions, until possibly agreeing on a solution.

Children who were criticised often found it difficult to face the group and sometimes became upset. It was hard to speak about something they did that the rest of the group saw as wrong (Appendix 13 'Transcripts and vignettes from Amoreira CM' 3). Young children tend to think that "doing wrong" is "being bad" (Claxton, 1999; Dweck, 2000). In these cases, Carolina's intervention was crucial in showing empathy for the child who was under such pressure, holding positive expectations about the child even while criticising his /her behaviour. Equally important was the fact that Carolina never discredited children's complaints. Later on in the year, some children showed that they learnt to discuss their peer behaviours without judging their personal worth:

> (Mn (4:9) is upset and starts to play (clapping hands) with another child as a provocation and Jr (6:0) who is the chair tells her to stop. Carolina also intervenes telling Mn that she is not helping T (4:0) and C (4:0) to solve the problem. Jr says something and Mn becomes very angry!
>
> **Mn (4:9)** (Fogo!) You are not helping me!

Teacher Mn, your problem hasn't been forgotten. We are just giving it a bit of time! ... We will go back to it. We are only trying to solve this with C and T and we will go back to yours, ok?

Mn (4:9) You are bad.... (With a crying voice) you do not like me!

Dg (5:5) We like you!

Td (5:0) We do like you!(stands and uses his hands to emphasise)

Teacher Why do you think we don't like you? Aren't we trying to help you?

Td (5:0) Of course we like you!

Mn (4:9) Some times Dg does not like me.

Dg (5:5) I am joking.... (Looks very serious)

Td (5:0) That's because you hit him! (Explains clearly to Mn with his hands)

Jr (6:0) Yes, that's it! And than he goes to write in the 'Diary' that he doesn't like you to hit him.

Teacher Mn, do you agree that we will solve this thing with T and C and only after that we will solve your problem?

(FCM6 Feb 04)

In May Mn. (5:0) told her friends she was going to behave that day and Carolina highlighted it to the group "*Did you hear to what Mn said? Mn wants to behave and we're going to help her, aren't we?*" Mn was integrating the classroom social rules and using them for self-management of her behaviour in the classroom.

The discussions of each 'We didn't like' incident without rushing into quick solutions were rich in opportunities for children to learn about conflicts, why they arose and how they could be prevented or solved. In Amoreira FCM children's personal 'goodness' or 'badness' were never emphasised as the origin of problems.

Based on children's understanding of the conditions in which problems arose, problem solving included different processes and strategies: just talking through what happened; apologising and forgiving each other; hugging or kissing each other; promising to make an effort or to be careful; promising to help each other; agreeing about a new rule for the group; understanding what to do next time. Despite most problems starting off as a two-children conflict, the group was always invited to participate in the discussions, help find a solution or an agreement, and act as a supporting community for the children involved. The group also learnt of the difficulties and challenges of living together; they collaboratively constructed rules and learnt to trust the community.

This process of solving problems did not seek conformity or passive compliance to the group rules. Fp's (3:2) decision about not doing PE was respected by the group, which committed itself to show her how good it was to participate in gym sessions (FCM2 episode 4). Neither were all conflicts solved during FCM discussions: Mn (4:6) did not forgive Td's (4:9) saying bad words but he promised to be more careful (FCM3 episode 2); T (4:0) did not apologise to L (4:6) but he forgave her anyway (FCM6 episode 4). Such episodes were clear demonstrations of the power that was assigned to individual children to have their own views and not comply with the majority one, hence respecting their individual feelings or wills. A clear demonstration of the free expression of ideas and points of views in this classroom was the fact that two children wrote in the 'Diary' 'We didn't like' column something about Carolina. They discussed this during the FCM and Carolina had to justify her behaviour to the group and apologise to the children who were reporting as it was not her intention to make them upset.

Despite the richness of the CM group interactions, the language Carolina and the children used to express feelings and states of mind was somewhat limited. The analysis of the interactions pointed out the overuse of the word 'sad' when discussing the 'We didn't like' column. This shows a poor repertoire of mental states vocabulary used to express their disagreements or frustrations, limiting the descriptions of conflicts and problems to a restricted number of feelings or emotions, thus impoverishing children's mentalistic language. The role of adults in modelling such language in interactions with young children is seen as determinant in children's development of a theory of mind (Astington and Pelletier, 1996; Pramling, 1996).

Reading the 'We liked' column

In the 'We liked' column the teacher was one of the main participants (15 out of 31 entries). She used this column to highlight good behaviours, how to do things properly and to create a community of cooperative, responsible hard working learners. The analysis of the 'Diary' entries showed that Carolina valued arriving at school early, working hard, doing different types of work (new activities), helping each other (particularly the younger children), speaking in a soft voice, children's cooperation and negotiation, lending something to others and children doing what was promised. Responsibility, work, motivation to engage in new experiences, cooperation and pro-

social behaviour were thus distinct values of this community of learning conveyed through the 'Diary'.

> 1 **Teacher** I liked very much that T lent the book to Mn, do you remember T? Do you remember Mn? Don't you? Where was this? Do you remember when T lent her book to Mn?
>
> 2 **?** No.
>
> 3 **Teacher** It was in the library, T had "Zebra Camila" little book, and Mn really wanted to see 'Zebra Camila' book.
>
> 4 **T (3:8)** She wanted to grab it from me.
>
> 5 **Teacher** And she wanted to grab it from you. But then, you didn't let her do it. And then, Mn asked T "please" wasn't it? And I said "Mn you can't grab the book, you have to ask and say "please"... and then, Mn? Tell us what happened next.
>
> 6 **Mn (4:5)** I told T "can you please give me the book?"
>
> 7 **Teacher** And what did she do?
>
> 8 **Mn (4:5)** And she gave it to me.
>
> 9 **Teacher** She lent it to you. You only needed to say a small word. Just like this: "T can you please give me the book?" And T immediately gave it. T did the right thing and that's why I wrote here that I liked that this happened.
>
> (FCM audioOct03)

In the above extract, Carolina took the opportunity to teach the children how to cooperate. She also grabbed the opportunity to positively value specific behaviours of the two most conflicting girls in the classroom (the ones most often "listed" in the 'We didn't like' column), assuming her role as a supportive adult. In February, the group discussed T's behaviour and, while they make frank and objective comments, they also assumed that they had to be patient and tolerant towards her. The children learned to speak about each other openly while also showing positive feelings towards misbehaving children (Appendix 13 'Transcripts and vignettes from Amoreira CM' 4) '.

The analysis of the children's entries in the 'We liked' column showed an evolution in their ability to notice positive behaviours in their peers. Carolina's teaching strategies, particularly modelling were instrumental in children's change in participation in adopting a positive approach to being part of a community and to understanding how they could contribute to it.

6.2. Council Meetings at Magnólia Classroom

The CM in Magnólia took place in the multipurpose area with Patrícia sitting at either the head or in the middle of the table. As children joined the group, Rosa assisted them in finding a place at what was often a crowded table.

6.2.1. What did children and teachers do during CM?

MCM at Magnólia

The analysis of the videos and field notes showed that Magnólia Classroom used the MCM essentially for planning the week and day and sometimes for assigning responsibilities (Table 6.3.).

Table 6.3. Time distribution of MCM at Magnólia

Recorded Magnólia MCM	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
News	-	-	-	-	-	-	-	24
Planning the week and the day	18:37	16	16:15	21:50	24	16	20	4
Responsibilities	6	4	-	3	3	-	-	-
Total video (minutes)	**24:37**	**21:00**	**22:18**	**23:50**	**36:24**	**20:34**	**20:10**	**28**
Number of children	20	19	18	19	18	19	18	18

The MCM ran for a mean of 24:30 minutes, ranging from 20 to 36 minutes (20<24:30<36). Only one of the videos (MCM8) included children's talking about

individual issues. The Morning CM in Magnólia had a very consistent planning structure:

Planning the week and the day (always) Reading the last week's minutes Writing in the 'We want' column Deciding what to do that day and writing the plan for the day Week responsibilities (sometimes) Length of time: 24:30 minutes (mean) ranging from 20 to 36 minutes Number of children: 19 (mean) ranging from 18 to 20

The way the group carried out their planning actions is going to be fully analysed in the section 'mediated interactions' bellow.

Assigning responsibilities

At the Magnólia classroom the children's responsibilities were: setting up the table, illustrating the 'Diary', illustrating the 'Weather Chart'; updating the 'Calendar'; counting the children for lunch; taking care of the turtle (October) or feeding the rabbit (May); tidying up the school's library; delivering the fruit snack (from April). At the end of the Monday morning CM, Patrícia changed the responsibilities according to the children's' choices, which she usually accepted unless one child always chose the same task. She also invited children who never volunteered to assume some responsibilities. There was no evaluation of the way children carried out their responsibilities. The children perceived these tasks as something they did if they wanted to (children's interviews) and not as contributing to the quality of the group's life for which they should be accountable.

Afternoon CM at Magnólia

Afternoon CM was a short meeting (+- 10 minutes). The group used the Daily Plan to check what was finished, what needed to be continued and what was not done. These evaluations were registered using colour code: green, yellow and red circles respectively. The finished activities were written down in the 'We did' column of the 'Diary' and some ideas for new plans started to arise and were written in the 'We want' column of the 'Diary'.

The afternoon CM was not consistently realised (11 of the 26 days) due to Patrícia leaving the school early for study, birthdays or communication of a project to another classroom which required an adjustment of the daily routine.

FCM at Magnólia

The week cycle ended with the FCM where the group evaluated the week by reading the 'Diary' and pre-planned the next week (Table 6.4.)

Table 6.4. Time distribution of FCM at Magnólia

Recorded Magnólia FCM	**FCM** Audio *	**FCM** Audio	**FCM 2**	**FCM 3**	**FCM 4**	**FCM 5**	**FCM 6**	**FCM 7**	**FCM 8**
Introduction	3	5	6	7	6	8	4:26	5:28	4:30
We didn't like	11	20	13	3:30	13	8	3:40	:40	4+3
We liked			4	5	2	4	10	4:40	3
We did		10	5	8	4	3	13	1:10	3
We want			3	1	3	1	3:15	8	5
Total length	**14 of 27**	**35**	**30**	**24**	**29**	**24**	**34**	**20**	**23**
Number of children	20	23	20	18	19	22	21	19	22

* This meeting was held on Monday and so it includes both Friday CM and Monday CM activities

As shown in table above, FCM in the Magnólia classroom was very consistent in terms of its structure:

Introduction
Reading the 'Diary':
- We didn't like (always)
- We liked (always)
- We did (always)
- We want (always)

(After each section Patrícia and the children write a summary of the evaluation and the decisions made in the Meeting Minutes)
Length of time: 14 < 26 min < 35
Number of Children: 18 < 20 < 22

At the Magnólia FCM all parts of the 'Diary' were read and discussed, and a summary of the evaluation and future intentions were registered in the meeting minutes. Most children had their own notebooks, which they used during the meeting to represent their planning decisions, the 'Diary' and the minutes of the meeting (Appendix 14 'Magnólia children's writings during CM').

6.2.2. How did participants of CMs perceive this activity and their main goals?

Teacher's perceptions of CM

Patrícia saw the CM main goals as *planning and evaluating together* and *also to learn to live in a group.*

The central importance attributed to the group in taking decisions and knowing about each other's activities and learning was, in Patrícia's view, central to the children's autonomy and self-regulation, and this shared responsibility for the curriculum gave them ownership of it.

> Children's becoming conscious of the curriculum (through participating in planning and evaluating) is very important because they self-organise according to their own interests and what they think is important or what in some respects motivates them to learn... It was very interesting for instance that today after the plan of the day Fc came to me and said: "I am ready!" and I had already forgotten what he meant by "being ready?" and he said "Yes, we have to go to do the illustrations of "John and the Magic Black Bean" book in print, did you forget? So they know what has been planned and they have control of it and they can self-regulate their day and their time in an autonomous way. (Patrícia #4)

Through planning together children, in her view, were informed about what was going on in the classroom and took responsibility for carrying out the group projects and plans. Patrícia assigned great importance to the "planning and evaluation system" and the use of tools. She explained extensively how the planning and evaluation system worked and how they used the different tools in each step. In Patrícia's perspective, evaluation and planning were deeply interconnected and ensured the continuity of a spiral cycle of evaluation, planning, doing, evaluation, planning, ... This continuity was supported by the 'Diary' columns 'We did' and 'We want' as well as by the minutes which summarised the Friday CM and were used as a starting point in MCM (Patrícia #1) (Appendix 15 'Transcripts and vignettes from Magnólia CM' 1).

Concerning the goal of learning to live in a group, this included, according to Patrícia, to 'discuss seriously the moral attitudes that occurred' and promote the emergence of social rules. This process was, according to her, a difficult one. She expressed concern with the evaluation of the group's attitudes and behaviours, defining it as a sensitive moment, particularly when individual children were evaluated within the group.

> ... it is perhaps the most difficult situation in this way of working with children... even though the 'Diary', for example, is the most important piloting tool in the classroom, I am also conscious that if it is not carried out well it can turn into a sharp sword. Because the "We didn't like" can rapidly change from being an evaluation column to become a "telling off" column ...or the 'We liked' one when, in fact, we are always congratulating the same children. It is when I am conscious that I have a role of some importance believing that I cannot or I should not be directive. All this in a 15 to 20 minutes period, it makes us feel the pressure. A big responsibility as a teacher. It is perhaps one of the most difficult times and I feel and think yet... if there are some things I already have under control (master), this part I know I have a lot to improve...because, it is in fact a very difficult moment (Patrícia#3).

Patricia recognised the crucial role of the teacher in mediating the evaluation of their attitudes with the children. Although she expressed that it was important to do it, she highlighted that the way in which it was done was of crucial importance. She feared that children felt pressured by others' comments and also that only some children could end up being valued again and again. Moreover she expressed feeling the pressure of time to do all this (read the four columns) in 20 minutes. Finally, she acknowledged having some difficulty in carrying out these evaluations with the group and recognised the need to improve.

Children's perceptions of CM

When asked to describe their daily routine, most children identified the MCM (all except one pair) but only one child (J 6:3) referred to the afternoon CM. Friday CM was recognised by most children as the most important meeting.

The perceived goals of CM according to Magnólia children were: *to plan and evaluate* and *see who behaved and who didn't*. Writing down things was seen as the main action during CMs.

To plan and evaluate

All pairs of children mentioned either in their daily routine question or in the CM photograph that in CM they see what they have to do or plan what is to be done. Some children stated also that it was very important to plan and to evaluate because otherwise that would not know what they had to do and what they had done.

> **J St (5:8)** It's for us to do a Project. We write here, Patrícia writes our names so that we will remember. And here, there is a dot to tell who did it and who didn't ... and this project is to be carried on.

In three interviews (J St (5:8) and Pt (4:8); Sb (5:8) and Gç (6.4); N (4:10) and E (5:10) children associated the planning and the evaluation done in CM with dealing with "important things" such as projects.

The Daily Plan was recognised by all the children as something to use in order to know what they could do, and some (all but 5 pairs) also mentioned the evaluation of what had been done using the Daily plan and the coloured dots. The idea of children's management of the curriculum, stated by Patrícia, was at the very heart of the children's perceptions of CM.

To see who behaved and who didn't

The use of the 'Diary' columns 'We liked' and 'We didn't like' was also at the core of children's interviews about CM and the 'Diary'.

> **Gç (6:4)** Patrícia is here and all the children are here at the meeting to know what is important. As Patrícia has the 'Diary', ... and the thing to mark, it is to know why people did behave very, very well and did behave very, very badly...

Ten pairs identified seeing who behaved and who didn't as the goal of FCM. The Magnólia children viewed the purpose of such evaluation as either to "tell the teacher" about others' misbehaviours and show her how good they were or to remind them how to behave. Patrícia emerged as taking a central role, as someone who judged the children according to the 'Diary' entries. The children saw Patrícia's role as the regulator and did not mention or challenge their own role in this process.

> **T (6:1)** Because Patrícia said: when someone beats you, you go and write in the 'Diary' and then you tell me at the meeting.

Throughout some interviews, some children (seven) mentioned that Patrícia would punish them (not having playground time) if they didn't comply with something that was "agreed in the group". This was a surprising fact, as it was never observed during fieldwork; although sometimes Patrícia would reprimand children individually after the CM.

During the interviews, there was no mention of trying to solve problems or that the 'Diary' helped children to deal with their frustration or to overcome their problems, as

we saw in the Amoreira classroom. Fd commented that children kept doing the same things again and again.

R Why do you write in the 'Diary'?

Fc (5:6) Because when we have a "nice attitude" we have to write in the 'Diary'.

Fd (6:0) If not we are punished.

Fc (5:6) we have to write in the 'Diary' so that we remember and also to read.

Fd (6:0) at the council meeting (Friday).

R How is that?

Fd (6:0) Patrícia reads, the first column she reads is the 'We didn't like' column... after she writes on a piece of paper the bad attitudes so that one remembers.

R And do you say something? Do you talk?

Fd (6:0) We do talk. Everybody says that they will never do it again. But then they do it again.

R So, do you think it helps?

Fd (6:0) Yes, it does... because we remember not to do.... For us to remember and then.... Perhaps if we misbehave again....

Fc (5:6) If they misbehave you have to write in the 'We didn't like' column.

Fd (6:0) And if they do again then they are punished. Sometimes they are punished.

Although Fd (6:0) thought that the discussion of the 'Diary' columns was not working towards preventing future problems, he still believed it was effective, as writing the same things again and again might help them to remember and prevent them from misbehaving.

The children's perceptions of FCM and the 'Diary' is in contradiction with the MEM philosophy of finding ways to solve problems and to develop socially and personally with the support of the group, without ever punishing the children (Niza, 1991).

Writing down

More than talking, or discussing it was writing, which was perceived as the main action in CM. In the children's view, writing was important to remember and to stress what was seen as important: who behaved or misbehaved how they should behave as well as

what they wanted to do and what they were going to do as a group. Some children understood writing as something Patrícia wanted them to do and that they must follow.

R	And why are you going to write in there?
A(5:11)	So that children know what cannot be done.

R	And why is it important to write in the 'Diary'?
E (5:11)	Because Patrícia made a 'Diary' for us to write in.

The participants' perceptions of the goals of the CM and the piloting tools revealed great coherence in terms of planning and evaluating together. Most children saw themselves as agents, deciding what they wanted to do and the CM as a central regulative instance of generating the curriculum based in meaningful activities, which is at the core of the MEM model goals. Patricia understood this active participation as also contributing to children's learning to learn by learning to plan and devise projects.

In terms of learning to live in a community Patrícia's perceptions differed from the children. Patrícia understood the CM as the place to discuss seriously children's attitudes and build up the rules of the group. Building up positive attitudes in the group seemed to be, from the children's perceptions, reduced to checking who behaved and who did not. The children also perceived Patrícia as a powerful figure as they explained the purpose of doing many things was to comply with what she said or wanted, in a performance-oriented attitude, and contradicting the democratic ethos that is at the heart of the MEM model. (Appendix 11 'Summary of teachers' and children's views of activities' 2).

6.2.3. The roles and opportunities for participation

Chair - Patrícia chaired the meetings. Her role included: conducting the meetings, reading the 'Diary', inviting children to talk, giving the floor, writing down in the piloting tools what had been agreed upon, managing behaviour and ensuring the smooth running of the meeting. One child was sometimes appointed as *secretary* to write the minutes. However, this task was not part of the responsibilities chart, and acted only as a pretend role to give a particular status to a child.

Participants – The children's role included discussing attitudes with Patrícia, explaining what they did, agreeing on rules, participating in evaluating what had been done and

giving ideas for the planning of the next day or week. Dictating the summary or conclusions of decisions to be written down in the 'Diary' or the minutes as well as writing individual notes about the meeting, were also part of the children's roles. The participants who had their names in the 'Diary' 'We liked' and 'We didn't like' columns, had also sometimes to explain the episodes that prompted them to write in the 'Diary', so that the group could evaluate them according to the classroom rules.

The opportunities for participation in CM were quite dependent on the children's willingness to express ideas, to volunteer for activities and lastly by their ability to gain the floor. The analysis of the Diaries and Daily plans where children's names were registered, revealed which children participate most in CM (Appendix 12 'Patterns of participation from analysis of CM piloting tools' 3 and 4).

Ten children (43%) wrote in 'We liked' columns; twelve children (52%) wrote in 'We didn't like' columns; seven children (30%) did not write in any of the first two columns. Generally it was the older children who used the 'Diary' to write. The youngest nine children in the classroom either did not write in any of the columns or wrote only once. The older children who did not write in the 'Diary' (Dn, Gl and A) were children who were more silent and avoided being in the spotlight.

Only seven children (30%) were mentioned in the 'We liked' column and twelve children (52%) were mentioned in the 'We didn't like' column. The fears that Patrícia expressed in the interviews about the danger of always valuing the same children in the 'Diary' appear to be confirmed, despite her awareness of the problem. Patrícia herself only wrote once in the 'Diary' and therefore did not model children's use of the 'We liked' column nor did she use this column to balance the fact that some children were never positively mentioned.

From the Daily Plans quantitative evaluation of the children's participation the same pattern emerged. The younger children in the classroom were the ones that had their names assigned to the activities least often. Rf (3:9), M (3:11) and Rd (3:11) had respectively their names on 3, 4, and 5 times. On the other hand, T (5:5), Sv (5:7) and Gç (5:8) were assigned to activities 30, 24 and 18 times respectively.

Younger children were clearly not invited to participate in CM discussions or planning of goal-oriented activities. In a conversation with Patrícia about the younger children's "poor" (peripheral) participation in the meetings, she responded: *"I couldn't invite them*

to participate more as they are extremely shy. What one expects is that they remain quiet and do not disturb others". She seemed to be thinking about this issue while she was providing the rationales for their poor participation (conversations with Patrícia April)

As mentioned before, the older children who were less vocal, also had a more peripheral participation in the CM. Participation appeared to be related to the children's individual personalities and Patrícia did not seem to contradict such 'natural' trends, thus leaving opportunities for participation at one's own peril.

6.2.4. The mediating intera-ction at Magnólia CM

As in the Amoreira classroom, Patrícia and the children used writing and some piloting tools ('Responsibilities Chart', 'Diary', 'Daily Plan', 'Meeting Minutes') as a complement to language. Most children wrote in papers or in minutes books during the Friday CM. The use of these material tools framed the ways in which Patrícia and the children interacted (see using language towards goals section).

The piloting tools and children's minutes

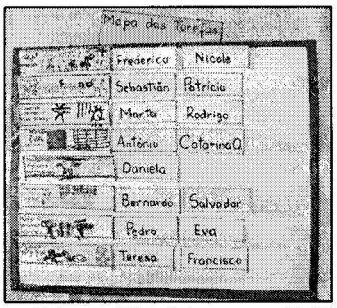
Classroom 'Diary'

6.7. The Magnólia 'Diary'

The two columns 'We did' and 'We want' were always the most used in Magnólia classroom reinforcing the "culture of interesting work". The children themselves wrote in the 'We want' column, showing the value of self-initiative and ability to express ideas for learning. The children's illustrations and spontaneous writing was also a sign

of the meanings attributed to this important tool. The four columns of the 'Diary' framed the focus on evaluation for planning. Patrícia wrote detailed narratives of the events, including the children's feelings

Responsibilities chart



Picture 6.8. Magnólia 'Responsibilities Chart'

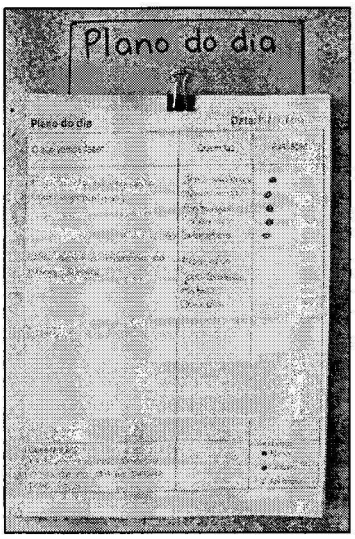
The chart was clear to the children as it combined both writing and their own drawings of each responsibility. The chart was placed beyond the children's reach and it was Patrícia who changed the children's names by asking them to select their choices.

Daily Plan

The Daily Plan extended the 'Diary' in regulating the ongoing group activities and their evaluation. The use of colours to code evaluation enhances its transparency.

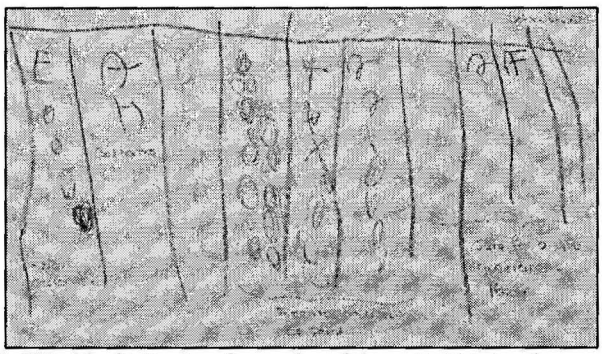
Plan of the day Date: 15/04/04

What we are going to do	Who does it	Evaluation
Plan of our classroom (correspondence)	J St C O A Sv *Sb	
Book about the history of our school	Fd J St Rf Dn	
Notes: * Didn't planed but joined in afterwards		Evaluation (code) We did We didn't To be continued



Picture 6.9. 'Daily Plan'

Children's writing during CM



"We didn't like", "We liked" "we've done a lot of things" "this is what we wanted to do" S

Picture 6.10. Child's writing during Magnólia CM

Patrícia invited the children to write down the important things that were said during the meeting. The children grabbed a piece of paper, copied Patrícia's behaviour (writing during most part of the meeting), draw the tools used and wrote down the content of the meetings. In the end Patrícia wrote down the meanings of the children's work. (more in Appendix 14 'Magnólia children's writings during CM')

Meeting Minutes

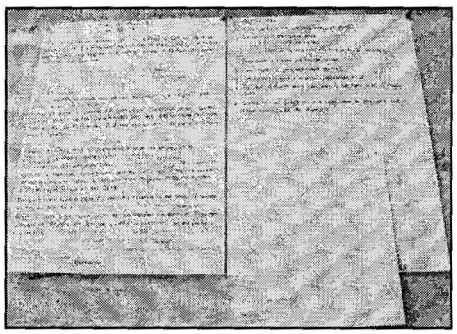
Meeting Minutes
17.10.03

We've been reading our 'Diary'. We read the 'We didn't like' column and we were a bit sad! We have been forgetting about the rules that we agreed on and we have attitudes that are not very nice.

We agreed that we are not going to forget about the rules we decide in the class.
We looked at the 'we like' column and it was empty. We've agreed that we will be more attentive to the nice attitudes of our friends.
In the 'We did' column we were very happy because it was full!

We read and saw that we had the newspaper front page done and our names ."
We've started a new project:
We found out that there were some children with loose teeth and others that had lost teeth. We also found some books in our library about teeth.
We found out that J is the tallest child in our classroom. We measured ourselves and

We did a new book with painted illustrations. We wrote the story after having listened to the story "if I was very tall!"...



- To do the chocolate cake on Monday
- Go and by cream to:
  - do a cream cake
  - for Zulmira to teach us to do butter.
  - To carry on with our classroom newspaper
- Carry on with the teeth project
- To find out who is the shortest in the class
- Write a letter to invite the dentist to come to our class
- We agreed to have soup and jam with the pumpkin Fd brought us from Alentejo

(the piece of writing is "Today's' minutes" by Dg 17.10.03

Picture 6.11. The CM minutes

The summary of the meeting written in the minutes and displayed together with a sample of the children's minutes, conveyed the importance attributed, by Patrícia, to writing with real purpose. The careful handwriting, the use of different colours to differentiate the individual and the group voices were details that showed how much energy and work Patrícia put into the visual material displayed in the classroom.

Using language towards goals in Magnólia CM

Evaluating and planning

Planning the group activities took part on both Friday CM (evaluation and pre-plan) and during the Monday CM (planning week and day) and was complemented every day in small CM. The structure of evaluating and planning the group activities followed a very consistent script. Despite being quite complex, Patrícia followed every step of this procedure in all the CM videos:

Friday CM
1) Reading 'We did' column 2) Reading 'We want' column and checking what has not been finished. 3) Asks children what else they want to do and summarises what needs to be done next week 4) Writing the Meeting Minutes

Monday CM
1) Reading the last week's minutes 2) Writing in the 'We want' column 3) Discussing what is going to be done today 4) Writing activities in the Daily Plan 5) Deciding who is going to do the activities 6) Summarise and dismiss

The evaluating - planning cycle grounded in the children's ideas and interests was scrupulously followed by Patrícia throughout all the meetings. Writing down the decisions taken during the meeting ensured that nothing was forgotten and would be followed up the next week. The children understood the meaning and goals of the activities and participated actively in generating the curriculum.

Teacher to finish our newspaper also. It only needs the front-page.

? I will do it!

Teacher Ask Zulmira to by the cream to do the butter we've done it also.

? It's also finished!

Teacher Ok then. I am now going to pass this to the minutes. ... C O those minutes are important ones and we have to put them next to these, ok?

(FCM2Magnólia)

By recalling and registering what was done in the 'We did' column, the group became conscious about what they had done. The 'We want' column gave them the sense of which things needed to be finished and the next week's plans started to arise.

The analysis of the dialogues during planning and evaluation in CM showed that, more than giving ideas for activities and projects, Patrícia invited the children to learn "*the project conduct*" putting a great emphasis on the children learning to devise goals and to plan the processes that were necessary for achievement. The interaction between Patrícia and the children was structured on a set of questions linked to the MEM project framework. Such metacognitive questions invited children to develop "a mental design composed of a chain of activities that together can answer a question or a problem" (Niza, 1996), thinking and reflecting about learning goals and processes and appropriating self-management tools.

M (4:7) and Rd (4:7) brought some snails and millipedes to the classroom. they discuss what they could do with them.

Teacher look and what are we going to do? So, what are we... (manage behaviour) what are we going to do to the snails and Millipedes?

Fc (5:6) we could do a race.

Sb (5:8) I know!

Teacher do a race? (she writes down) ... look Sb What could we do?

Sb (5:8) a project

Teacher so, and what are we...

Sb (5:8) a Project where we see ... (teacher writes down what Sb says)... a snails and Millipedes project .

Teacher a Project about snails... (writes down. Dg leans to see Patrícia writing) so, in order to do a project about snails and Millipedes .... What do you... want? What is the Project for?

Sb (5:8) Eee... to be ready... and to finish and show to mothers.

Teacher ok then... and what do you want, in the Project... what will we do? what are we ... why are we going to do the project?

Sb (5:8) we're going to draw them to see how they are!

.....

Teacher .... so, Sb (5:8) says that ... Fc (5:6) and J St Say that we could do a race. Sb said we could do a Project to know things about them, didn't he? ...so and what would you like to know about the snails?(the interaction lasts 6 minutes)

(MCM8 Magnólia)

Projects became associated in this community with important things, with something to be communicated, but most importantly with the process of inquiry or production.

As some children progressively appropriated the project intellectual path, others sometimes found it difficult to follow this whole-group language base activity. In planning the week or the day, Patrícia used open questions appropriate to induce a project mental design. The transcripts of the CM were rich in "What?" (goals) "How?" (processes) "Why?" (rationales) "Who?" and "When?" questions. Patrícia invited the children to think and suggest activities, materials and projects and she included some of children's suggestions in the planning. Patrícia explained why a suggestion was not suitable for the goals they had set up: for example, doing a theatre for E's parents would not satisfy the goal of gaining knowledge about what firemen do.

Such interactions though, were not always sustained as Patrícia's initial open questions were often transformed by her follow-up feedback into closed questions. Patrícia stressed the intellectual path of planning but she somehow failed to involve the group in thinking together, co-constructing ideas and plans and decisions. When she did not agree, she simply did not accept the children's suggestions and she did not try to understand the children's intentions or rationales.

> How are we going to do the front cover? Fd suggests with some drawings or 'digitinta'. B suggests doing it in the computer, which Patrícia rejects (without trying to understand in which way he thought they could use the computer or even trying to incorporate his idea) (MCM5Magnólia).

On some occasions, Patrícia used a very loud tone of voice and evaluative feedback on the children contributions *("when you don't listen you don't think, when you don't think you say wrong things!"* or *"No!* - Appendix 13 'Transcripts and vignettes from Magnólia CM' 2). Despite the fact that she sometimes used descriptive rationales to

complement her evaluative feedback, and tried to prompt the children's thinking using the appropriate questions, her tone and power seemed to impact on the children's thinking. Not feeling entirely free of her judgement, some of the children tried to guess what was on Patrícia's mind rather than expressing their own thinking. By putting too much emphasis on their inadequacy, the children displayed competitive attitudes (for the right answer), dependency on Patricia's thought process and fear of failure, which are associated with performance-oriented behaviours (Dweck, 2000). Competing for the role of being the smartest, children engaged often in disputational talk rather than cumulative or exploratory talk (Mercer, 2000). Mercer (2000) highlights the importance of a teacher modelling cumulative and exploratory type of talk to promote such talk among children. In his view, in such types of talk, discussion has to centre on ideas and not on 'being right' or 'getting it right'.

Some children seem to be more vulnerable than others in dealing with this control over their thinking. Throughout the year, it was apparent that some children had a greater awareness of the planning procedures and were participating more fully and rationally offering ideas. Fd and B were particularly very active; they used the planning dialogues to anticipate what they were going to do and how they would manage their time.

> (Fd(5:11) had planned in the Activities chart to go to the home corner. Later, during the MCM he volunteers to plan the gym class with other children. At some point he becomes aware that he has two types of plans for the day and he tries to think how he can do both things.)
>
> **Fd** So are we going to play while we are thinking?
>
> After a while Patrícia understands what Fd is trying to ask and she explains that he chose to go to the home corner (Fd confirms) and that the group now has to meet during the day in order to think about what they are going to do tomorrow in the gym class.
>
> **Fd** When?
>
> **Teacher** That's what you have to decide...
>
> **Fd** I think I already know. After we go to the things we choose...
>
> **Teacher** when this is?
>
> **Fd** after the home corner and the other things, perhaps in the afternoon or after eating the fruit in the morning break.
>
> Fd is trying to make sense of the planning and tries to combine his interests and organise his day in order to do everything he want.
>
> (MCM7Magnólia)

Here we see how important it is for the teacher to try and understand what the child is thinking and why, in order to communicate with him. In this way, she was also able to support Fd in thinking and deciding when he was going to carry on his plans. Fd felt free to express himself, making explicit his questions and thoughts, using language to self-direct his plans, and displaying metacognitive statements such as *"I think I already know... after we go to the things we choose"*.

Reading the 'Diary's 'We didn't like' and 'We liked' columns

In Friday's CMs the group started by reading and discussing the first two columns of the 'Diary' following a somehow consistent script:

1) Teacher reads all the entries in one column (first 'We didn't like' and then 'We liked') 2) Reflecting and evaluating about the incidents in general – reinstating rules and good or bad behaviour 3) Agree on what to do in the future 4) Writing the minutes - summarizing

Patrícia read all the sentences in each column of the 'Diary' before starting to discuss them with the children. This strategy seemed to frame the type of talk that children undertook during these discussions. Patrícia got the children to reflect on the reported incidents evaluating them all together, which lead them to make general judgemental comments related with 'good" or 'bad' attitudes or behaviours, instead of thinking and discussing through a particular event.

Patrícia reads four sentences all dealing with children kicking each other.

Teacher	What is this?
C O(5:10)	that's misbehaving!
Teacher	Did you heard what C O said?... what do you think about that?
T(5:7)	I think that it is very bad (not nice) to do that!
Teacher	why?
T(5:7)	Because than they are not friends anymore.

(FCM2Magnólia)

As the incidents were already divided between the 'We liked' and 'We didn't like' columns, this evaluation did not add significantly to the understanding of the problems. After restating what was classified as "bad attitudes" or "not being friends", a rule was usually recalled and the children were reminded that they had this rule and they already

knew that those things should not happen. In some of the interactions about the rules in the classroom and how children should behave or "be good friends", Patrícia encouraged the children to think about the rationales behind these rules:

> Why can't we take our friends things? – Because it makes them sad (FCM1Magnólia)
>
> Why can't we beat our friends? – Because it hurts (FCM2Magnólia)
>
> Why can't we hide things when tidying up? Because we cannot find them when we want to play (FCM3Magnólia)

Most times though, it was difficult for the children to reach such conclusions when commenting on many different incidents in general terms.

This general, rule bounded and superficial evaluation, was supported by the recurrent quantitative criteria of having a full column or having an empty one, relating quantity with personal feelings of satisfaction.

> Then she asks what it will mean if one day the column is empty. Fd says that it will mean that we've all behaved. Patrícia asks how will they feel and several say "Good!" (FCM1Magnólia)

Such general and evaluative association between having problems and not being friends did not empower children to learn how to deal with their everyday problems, by understanding the complexities of people's relationships. Moreover, such general statements did not promote the exchange of different points of views, tending to reduce these interactions to a repetition of a discourse with which it was very difficult to disagree or stand against. "Bad attitudes" - "we are not friends" - "we are not growing"; "beautiful attitudes" – "helping each other" - "being friends"- "being grown ups".

On some occasions the children attempted to discuss their own problems as they felt that they were not being solved, but Patrícia did not give them time: "But we have already talked about his" (FMC2 B; FCM4). It seemed that she was pressured to complete the agenda by going through all steps of the 'Diary' and writing the minutes. In some cases (FCM4) the children continued to blame each other while Patrícia was writing in the minutes that they were sad about these attitudes.

Sometimes the feelings of the children involved were not recognised. In the next transcript Patrícia tried to solve quickly an incident disrespecting J St feelings and views and, with her persuasive power, she did not give the child the opportunity to disagree.

Teacher But perhaps if it was only some kind of play you could also have accepted. Do you think that... you think it was so important J St to the point of having to write in the 'Diary'? They were telling you that they were playing. Perhaps it was some kind of play like... (shakes her hands) ... stronger, wasn't it? Silly...

J St (5:9) Yes, it was E who hit me... (cl)

E (6:0) I was joking!

Teacher Ok. But I think that it is already solved, isn't it J St? They are apologizing. What do you think? ... do you think... uhum? What do you think J St? Uhum? They already apologized? Is everything fine now? (child nod) Ok, so...

(FCM8Magnólia)

J St's perception of the event was not that it was "just playing"; however this was neither discussed nor questioned. A similar incident happened in the Amoreira classroom which led to a discussion about "can we play tricks when others don't want to play?" in which the children expressed their own views, presented examples and considered others points of view in trying to find an answer to this moral problem.

The concluding remarks of discussing the 'We didn't like' columns express the way in which the group envisaged that problems could be solved. The analysis of the videos and minutes show the following types: we promise to stop doing it; or make an effort; remember the rule; write down so that we do not forget the rules; help others to remember the rule; helping others to think before acting.

Helping others to think before acting (FCM5) is one strategy, which might in fact help children to understand how they can prevent some problems. Although, very few of these strategies were explored during the FCM.

The need to comply with the classroom rules was the most often concluding remarks. This focus on rules to prevent problems did not seemed effective in building up a community. Statements written in several minutes ("we keep forgetting about our rules" and "we promised to remember our rules") show that little progression was made throughout the year. As previously presented (children's perceptions of CM section) Fd was also aware of this problem.

During the discussion the children tried to comply with Patrícia's discourse clearly understood by the children. Cooperation and solidarity among colleagues (helping to solve their problems) was not fostered when children seek to be praised by Patrícia (being a friend) displaying performance-oriented attitudes.

Writing down and interactions

Writing down in the 'Diary', the 'Daily Plan' or in the 'Meeting Minutes' took a good part of the CMs. Writing helped the group to understand the activities they were going to be involved in (as they read, wrote, read again to evaluate and wrote what they would do next), and the rules and the moral attitudes were continuously reinstated in the classroom as children were invited to dictate to Patrícia and to agree about what she should write. On the other hand, writing also shaped the way Patrícia and children communicated throughout the meetings. The ability to give explanations, to explore different points of view and different possibilities by welcoming several children's own ideas, experiences and voices and building up from there into a common understanding and agreement was not easy to do in a big group. This seemed to be particularly difficult when Patrícia had her head down writing and the interaction was framed by this need to write things down. The time to think together was shortened, in favour of the recalling and dictating of each idea (plans and evaluations). In April, Patrícia explained that this strategy had the function of holding the group together, paying attention to what was said and decided, and learning about writing. In these terms, it was really effective (see Appendix 14 'Magnólia children's writings during CM') and the repetition of ideas, decisions, and judgements really reinforced the classroom culture and discourse in the children's minds. However, this did not seem to promote dialogue and learning to discuss and listen to different points of view, to reflect and to make decisions with the contribution of the group, co-construct meanings and build a supportive and diverse community.

6.3. Council Meetings summary

This section summarises the analysis of the CM activities recorded at the two classrooms. Differences, as well as similarities between the two re-interpretations made by each community will shed a light on the potential of CMs, a central activity within the MEM model.

What were the critical features of CMs?

CMs are a whole-group language based activity central to regulating the life of the classroom communities. At CMs the groups used the 'Diary', a piloting tool that both registers and directs the CM actions, and the 'Responsibilities Chart'. Other tools were used in each classroom to support the activity: the 'Meeting Minutes' and the 'Daily Plan' in Magnólia, and the 'We want to show, tell or write' list in Amoreira.

According to the teachers' views, CMs had two main central goals: *planning and evaluating in cooperation*, and *learning to live in a community*. The data collected during this work showed that the realisation of these goals differed in the two classrooms: at the Magnólia classroom "planning and evaluation" was at the core of CMs, while at the Amoreira's "learning to live in a community" took the central focus.

An essential feature of CM was children's participation in the decisions about the curriculum through planning and evaluating. Planning emerged from children's individual interests, from the teacher's suggestions, from the needs and interests of the group, or from community relevant activities. The curriculum was implemented through significant activities based on real life problems and children's interests. The cooperative planning of the week and day promoted also the negotiation of common purposes and goals and the transparency of what was understood as 'legitimate learning' thus promoting children's roles as "the crew and not the passengers" (Watkins, 2005b:47). When time was allocated to revisit past experiences, processes could be talked through, meanings and language clarified, and a sense of accomplishment and community promoted. Through participation in planning and evaluation children learned to move from 'just choosing what to do' into thoughtful planning according with goals (what and for what) and considering the contextual circumstances for realization (when, where, with whom, how) as well as learning to reflect on what they

had already done and use such reflection for designing new, negotiated, plans. The structure of the meetings together with the 'Diary' promoted a continuous cycle of evaluating to planning and back to evaluation.

Another critical feature of the CMs was the construction of a space and time for debate and critical co-construction of the group norms and social behaviour. In cooperation children learned to live in a community focusing on their own personal and social development (Niza, 1998). Through these discussions the regulative discourse and norms were constructed building up the ethos of the community, which should be inclusive, supportive and where responsibility for learning was shared.

Both features of CM are of major importance in contributing to the development of the citizen in a democratic society (classroom), which is one of the final aims of MEM. CMs are key in constructing a culture of learning in the classroom which values learning through collaboration and by engaging in meaningful goal-oriented activities.

CMs in practice and their contribution for learning to learn

The analysis showed that, within the different types of CMs, the two classrooms did different things: at MCM in the Amoreira classroom, most of the time was devoted to sharing and talking about individual children's home experiences. This type of action was hardly present in the Magnólia classroom. Conversations during 'showing telling and writing' time were rich opportunities for young children to express their views of the world, confront their own experiences and points of view with others, and to jointly create meanings with the teacher and peers. These conversations helped children to link individual experiences at home to school life; strengthen the community (as they got to know each other and each other's experiences) and enriched each child's experiences by sharing and listening to someone else's point of view. Such conversations were very significant to the Amoreira children, who indeed perceived MCM as the place to "show, tell and write".

In both classrooms, the group planned the week and the day based on what was written in the previous week's 'Diary', including children's new interests and plans. The consistence of the Magnólia practice, its clear structure, and the time devoted to planning and evaluating during CM, probably made this an activity perceived by the Magnólia children as the main function of the CM. Patrícia used the tools consistently and helped the children to plan according to common goals, using the 'project

epistemology' linking the goals with the plan of the processes and actions that were necessary for their achievement. In both classrooms, planning together provided excellent opportunities for learning to learn as children engaged in metalearning, reflecting about goals, strategies, feelings, context and outcomes.

Assigning responsibilities was also part of both classrooms' MCMs but the procedures for assigning the week's responsibilities differed in each: a rota system at Amoreira, and children's choices at Magnólia. Such differences appear to account for different perceptions about what a responsibility is and what it entails: the Amoreira children saw it as something one had to do and which benefited the community, while the Magnólia children saw it as something they would do if they wanted. Only at Amoreira did the group evaluate the way children carried out their responsibilities, strengthening accountability to the group, social responsibility and progression.

In both classrooms the Friday CM included reading the 'Diary' columns to evaluate the week. At Magnólia, all the columns of the 'Diary' were read and discussed and a summary of the evaluations and group decisions was recorded on the 'Meeting Minutes'. Writing the minutes became central at the Magnólia classroom, and every child actually associated writing with what was done during CMs. The minutes documented and reinforced community decisions and reflections about learning throughout the year, as well as the classroom regulative discourse (being friends). The analysis of the interactions of such a process showed that writing the minutes may put in danger the quality of the interaction between the teacher and the children, and their active participation. At the Amoreira classroom, usually only the two first columns were discussed, focusing the FCM on discussing the positive and negative incidents. The evaluation and planning of the activities was frequently postponed until Monday MCM.

Differences in the way CMs were run in each classroom were due to contextual variables, institutional practices and the teachers' understanding of the activity. For instance, at the Magnólia crèche, the teacher's pressure (perceived by Patricia to be keeping up to the institution's standards) lead to the reading of all the columns in the 'Diary', and to the production of minutes at the end of each FCM. Carolina, at Amoreira, was free from such institutional practices, therefore able to adjust her practice with the children according to what she felt appropriate. The size of the group (smaller than Magnólia) also favoured Amoreira's long conversations in the morning, as well as the chances for each child's participation.

Other key elements of CMs were its structural organization and the way the children and the teacher interacted and used the tools. Both components constructed the social organization of the activities (roles, rules and division of labour), the cognitive and socio-affective processes, and the classroom ethos, as well as the potential for children to participate.

The prospects that all the children at Amoreira had to chair the CM in partnership with a peer, always counting on the teacher's support, appeared to be an important factor in the distribution of power and the clarification of the activity rules: as they were taking a central role, the children had the opportunity to be more actively involved in the meeting, increasing opportunities for participation for all the children. In contrast, Patricia chaired all the meetings at Magnólia. Although the script she followed was very consistent and allowed the children to be in control of what was going to happen, rules for participation in the interactions remained implicit and at her own control, leaving the children with less control over the activity. These different perceptions were obtained through children's interviews.

CMs are complex activities with sophisticated goals for a group of such young children. Both teachers acknowledged this complexity, while at the same time understanding its value. It was clear, however, from the teachers' interviews, as well as from the observations, that their level of confidence in dealing with such complexity and their expectations differed greatly. Carolina was positive and confident on her ability to deal with such complexity and had positive expectations about children's ability to engage in rich interactions and learn within the area of personal and social development. On the other hand, Patrícia expressed a lack of confidence and some concern, particularly in dealing with children evaluating each other's behaviours and attitudes.

From the analysis of the recorded interactions between the teacher and the children, some elements were found to have a significant impact on the way the goals of CM were promoted or constrained.

Involving all children in the conversation was not something that happened naturally in such whole-group language based activity. In both classrooms there were children who easily interacted and participated (for example, Dg, Fr and L in Amoreira; B, Fd and Gç in Magnólia) and who could at times monopolise the interactions. The use of the tools and the explicit rules for assigning the floor helped to promote a more equal

participation in Amoreira. Moreover, Carolina constantly invited the children to speak and to contribute to the discussions, which was crucial particularly for the younger ones and for the less outspoken children. At the Magnólia classroom, children who participated were the ones with natural abilities to put forward their ideas; Patrícia did not assume her role in contradicting this natural trait, thus not ensuring equal opportunities for all children. Her expectations for young or more reserved children were low, expecting only that they would sit quietly and not disturb the running of the meeting.

Another crucial element of the interaction was the way in which children's comments, ideas and lines of thought were valued, accommodated and challenged. To set challenging questions and expecting children to take rational decisions, requires scaffolding by the teacher so that children do not have a sense of failure. Patricia's challenges were sometimes out of reach for some children. At the same time she openly rejected some of the children's interventions or used counter-assertions, exerting control over what should be said. This sometimes led children having to guess what was in the teacher's head, ending up in competition between peers. Carolina's ability to involve the group in thinking together, co-constructing ideas, plans and decisions, promoted the use of cumulative and exploratory type of talk as opposed to disputational; according to Mercer (2000) the former centre on ideas, and not on 'being right' or 'getting it right'.

Learning to solve problems versus seeing who behaves and who misbehaves, were the two very different perceptions that children held about the Friday CM discussions of the 'we like' and we 'didn't like columns' in each classroom. Again, elements of the teacher's pedagogy were found to be critical for the progress children made in their personal and social development: first, discussing each sentence at time; second, giving the floor to the children involved so that the event was clarified and the intentions and contextual features understood by the group; third, inviting the group to comment, by evaluating the behaviour without judging the person, thinking about ways to solve the problem (without punishments); finally, giving the implicated children the power to say whether the problem has been solved or not. During this process the teacher's attitude was paramount in holding a neutral approach towards the children involved, supporting the child under criticism so that he/she did not feel accused as a person, encouraging a supportive but critical appreciation of the event, and respecting children's feelings and not imposing a quick resolution of the problem.

At the Amoreira classroom such factors lead to a clear improvement in children's ability to discuss behaviour without discussing a person's value, and understanding the role of the group as a supportive one in solving their problems. In this way children's resilience was clearly fostered. On the other hand, at the Magnólia classroom there was (some children actually voiced it) a constant repetition of 'the official discourse' based on general statements and rules, and on a very strong concept of goodness and badness. This focus on general evaluative comments rather than descriptive ones, as well as on personal traits rather then behaviours was seen to promote performance-oriented attitudes in children and to weaken their resilience. Such discourse built up a climate that made it difficult for children to evaluate, as opposed to judge, and fostered labelling children as 'good' or 'bad'. Reinstating the classroom rules was found to be insufficient as a way of helping the children to learn how to deal with their problems in a positive way. Discussing specific problems rather than general problems (we are not being friends) helped children to engage in manageable (possible) problem solving and gaining confidence in overcoming problems. In the REPEY study, it was found that the most effective settings had clear discipline and behaviour policies which prioritised talking through conflicts rather than adults ignoring or distracting children from interfering with other children (Siraj-Blatchford et al., 2002). The present study indicates that the way in which this talk is carried out is of paramount importance in promoting children's pro-social behaviour and resilience.

The CM activity poses many challenges to the teacher as well as to the children. Its potential for building up a community of learners is immense in many different aspects. These two cases illustrated how children became full participants in the generation of the curriculum and how this enhanced their learning to learn. It also showed the potential young children have to think and to discuss problems and overcome difficulties in a cooperative environment, as well as to take responsibilities for themselves and for others in the classroom community. Conversely, it also showed some of the risks children encounter when the organisation of the activity and the interactions between the teacher and the children were not carefully handled.

Chapter 7 Children and adults inter-acting during Activities and Projects time

The analysis of the Activities and Projects time (A&P) in both classrooms used field notes throughout the year as well as some video transcripts. This section includes also documentary analysis of the 'Diaries', the 'Activities Charts' (AC) and records or documentation of children's work.

The participants' views of the A&P time draw on interviews with the teachers (#1 and #4), conversations with teachers, part of the children's interview "Routines, piloting tools and groups situations" and children's interview about "Coming to school".

7.1. Activities & Projects in Amoreira

7.1.1. What did children and teachers do during A&P in Amoreira?

The analyses of the 'Diaries' (12), gave us an idea about the goal-oriented activities negotiated in the group and the 'Activities Charts' (4), the activities (individual or small group) that children got involved in, in the different areas of the classroom during A&P time.

The analysis of the 'Diaries' indicated that children got involved in a significant number of activities (28%) related to *celebrations* (birthdays, Easter, father's day, world book day). Such celebrations were planned and prepared by the children involving them in several activities (cooking, writing cards, decorations, presents, rehearsing songs). Secondly, there were the activities in *different classroom areas* (11%), such as doing word files, an experiment in the Lab or the development of an idea expressed during "Showing, telling or writing" in the MCM. Thirdly, there were the activities related to *outings and visits* (9.5 %) such as writing letters, reports (documentation) or making presents to thank the people involved. Activities related to *Projects* (4 %) came up in quite small numbers in the Diaries. During fieldwork we identified eleven projects being carried out in the Amoreira classroom. Out of these, five were *production* ones and four *inquiry* projects. Two projects combined p*roduction* with *inquiry*. From the inquiry projects, two did not reach a final phase as children lost interest and Carolina was not able to sustain their involvement.

After being dismissed from MCM the children approached the AC to choose what area they wanted to go to. The analyses of the ACs (Appendix 16 'Analysis of Activities Charts' 1) showed that play activities (91 mean number of activities per month) as well as art activities (88) were the ones children got most involved in. Reading, writing (34) and maths (28) came next and finally science experiments (6). The computer (21) allowed children to be involved in different types of activities from playing games to writing and drawing, doing graphs or using photos.

7.1.2. How did participants perceive these activities and their main goals?

Teacher's perceptions of A&P

Carolina defined A&P time as the time for children's autonomous work. The activities that children carried out during this period were, according to Carolina, activities or projects whose interest arose from home experiences or from the negotiation process that took place during CM and children's immediate choices planned in the AC (*Carolina* #1).

For Carolina, the classroom organisation and the materials provided were crucial for promoting and stimulating learning during A&P time. Learning in her view was based on the children's experiences and it is from hands-on experiences that discoveries occur and questions arise and can be the starting point for deeper learning (Niza, 1996).

> I try that spaces and materials are as rich as possible so that they feel curiosity about the world and about life. So that they will want to know and they will want to learn. (Carolina #1)

Carolina saw her role being to support, to stimulate and to mediate conflicts. Her goals were "Trying to get children interested and involved in the activities, that they diversify their choices the most and that they will go as deep as possible". For this to happen she used some pedagogical tools such as *"trying to provoke a new situation, a new material, a new experience, a question"* (Carolina #4). Although she saw this (deepening their learning) as a long-term process she believed that by the end of the year they were *"much more autonomous and they choose to engage in more difficult and complex activities"*(Carolina #1).

Carolina saw her role also as to promote learning processes such as cooperation, particularly between children that have friendship bonds (which she saw as facilitating cooperation) and between children of different ages (peer-tutoring).

> The bigger ones when they are explaining they are learning. Because we learn when we teach, don't we? And the small ones only by watching others they are also learning... and there is also self-esteem behind as there are children for whom it is difficult to engage in some activities in some of the areas. Particularly in the first times I encourage them to go with someone who already knows.(Carolina#4)

Carolina envisaged this period as one where activities must be purposeful, meaningful and also rich in learning opportunities. Carolina expressed having some difficulty in sustaining projects with the group of children who in her view had first to go through learning some basic abilities/skills of group work and collaboration, before they could engage in more complex projects (Carolina#3). While she acknowledged having some difficulties in supporting young children's sustained project work, she also justified the lack of project work in her class with the children's newcomer status.

Carolina assigned great importance to the AC and to the process of negotiation that occurs during the choice of activities. In her view the AC supports children's autonomous choice of activities by presenting the different possibilities available in the classroom making it easier for children to choose where to go, without depending so much on the teacher (conversations with Carolina November).

According to Carolina, the AC had also the role of helping children to manage their time and activities, promoting reflection on the activities they have been involved in, evaluating which ones they had been engaged in more often and which ones they had not, and promoting children's engagement in more conscious choices with learning as a goal (Carolina #2). According to Carolina, this process of evolving towards learning oriented planning was supported by negotiation between the teacher and the children based on rationales and purposes that need to be shared and negotiated.

> It is a piloting tool that I really think is important to ensure that the mornings are real learning moments.... until we arrive at a well thought out plan where children choose things that they have some difficulty with, that they like less or that they need to do more off.(Carolina #1)

> ... ought to be a thought choice based on something... they have to convince me why they have to go there.... If they want to go... Why? And if I want them to go somewhere else, why do I want it? We have to explain and always discuss this. (Carolina #4)

Her intervention during planning using the AC was, according to her, based on what she knew about each one, their interests and their needs:

> Some children are less autonomous and need more support, some have particular areas where they need to "practise more", and younger children have the need to go more often to the pretend play area, rather than being involved in developing other competences they need to learn how to play together with their colleagues. (Carolina #4)

Finally she also saw the AC as a tool that allowed balancing the curriculum for the group. The evaluating of the AC allowed seeing the areas that had been used more often and the ones that are not so much chosen. In her view, evaluating with the children why this happened was important, as sometimes the children brought their own views and often there were problems that the adult alone could not figure out. Such evaluation also helped her thinking in relation to introducing new materials and making changes in some activity areas so that they would be more attractive to the children (Carolina #4).

Children's perceptions of A&P

During the children's interview about "routines, piloting tools and group situations" all eight pairs of children mentioned that in the morning, after MCM or snack time they would *do different activities*. Most of the children (6 pairs) mentioned the idea of *choice* and also the *use of the Activities Chart* (6 pairs).

Children associated this period of the day with doing different activities in different areas of the classroom. Either they expressed this saying *"to do activities" (Dn 4:11),* or more explicitly "*We go and write in the office ... (Ag 4:5), "we go to the home corner, games,"(Js 5:3).*

The Amoreira children saw A&P more as work than playing. This view was corroborated by another interview with children ('Coming to school') where several children (49%) associated work with the purpose of coming to school; some said they came to learn (33%) and only 17% said that they came to play.

When prompted by the photograph of the AC, and asked about what it was and what it was for, many concepts of the function of this tool emerged.

Many children (7 pairs) referred to the AC by showing how to use it, performing the actions and operations to be done and the procedure rules to be followed.

> **Ad (6:1)** It is when children do a small circle they mark here and go and occupy that activity.
>
> **Ag (4:5)** No, has to be like this downward (she points to the names column) and them goes straight (follows the row with her finger).

Some children (4 Pairs) understood its function as supporting the choice of the activities.

> **C (4:3)** It is for us to choose what we want to do.

Another function assigned to the AC (although only 3 pairs had mentioned it) was to plan and support carrying out the plan.

> **Dg (5:3)** It's for us to remember what we have to do.

Also few children (3 pairs) expressed the use of this piloting tool to evaluate the activities that they have been choosing more often.

> **Mn (5:0)** It helps us to see where we have already any circles …

Finally, 3 pairs mentioned using such evaluation in order to plan more consciously.

> **Mr (5:10)** (we choose different activities) so that we can learn to do all these things.

The participants' views of A&P (Appendix 11 'Summary of teachers and children's views of activities' 3) in Amoreira showed that they shared a view of this time as a time for autonomous work in different areas of the classroom based on choices mediated by the AC. Both Carolina and the older children understood that choices ought to be oriented towards learning (reflection about learning needs, purposeful planning, self-regulated learning).

7.1.3. Participation during A&P in Amoreira

The quantitative analysis of the ACs allowed grasping how different age children participated in the different areas of the classroom (Appendix 16 'Analysis of the Activities Charts' 2). Although all age groups did participate in all classroom areas, there were some differences in terms of what different aged children did in the classroom. The analysis of the mean number of activities per age group showed that

three-year-olds engaged more in socio-dramatic play than five-year-olds (20 – 11 individual children mean number of activities in each age group) and in some art activities (cuttings (5.7 – 4.4), modelling (8.3 – 5.2). Three-year-olds engaged less in reading and writing activities (8 – 16), art activities such as the factory (4.8 – 11.4) and drawing (3.7 – 9.8), on the computer (5.3 – 8) and in the science Lab (0.3 – 3.4). In other areas the differences were not so significant: maths (5.8 – 5.4); games (14.3 – 14). The results of the four-year-olds have to be interpreted cautiously as this group included children with poor attendance rates.

Participation in projects was also not equally distributed across the age groups. Older children tended to be more involved in projects. This could indicate that Carolina had difficulty in adjusting project work to younger children's interests and capabilities. Beyond age, other factors determined the differences in children's participation. One five-year-old girl – V(5:8) never got involved in any project, on the other hand Dt (3:10) got involved in two. Looking at the individual children, the ones that participated less were the ones that were less outspoken or assertive. Carolina's awareness of children's individual needs led her, as shown before in the Council Meetings chapter, to be constantly promoting the participation of more passive children. This did not happen in relation to projects.

Carolina participated to different extents in the different areas of the classroom. The area where she got more involved with the children was the multipurpose area, particularly supporting children's art activities related with celebrations, junk modelling and projects. The second area where Carolina interacted more with the children was in the 'Office', followed by the 'Games and constructions', the 'Library' and the 'Science lab'. The 'Modelling', 'Painting', 'Blackboard', 'Maths' and 'Home corner' had little direct intervention from Carolina (sustained interactions), thus remaining areas without a learning project.

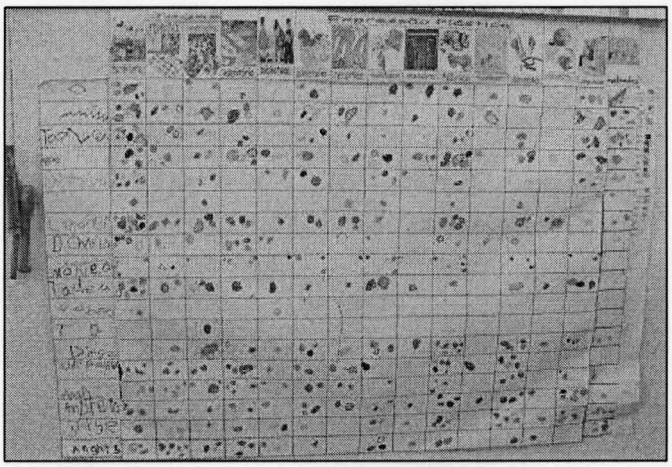
7.1.4. Mediated inter-action in Amoreira A&P

The processes children engage in during A&P time were mediated by the organization of space and materials in each area of the classroom and the piloting tools 'Activities chart', and the 'Number of children in each area'. Moreover action was also bound by the type of activity children engaged in and the interaction (language) between children and the adults in the Amoreira community.

As already described in the Amoreira classroom space and materials (5.1.5.) the Amoreira classroom offered a progressively more diverse and rich environment with different areas, where children engaged in different types of activities linked with different literacies. Some institutional factors as well as Carolinas priorities, constrained to a certain extent the possibility for providing a spacious well-organised and resourced classroom for this community.

The piloting tools

The 'Activities chart'

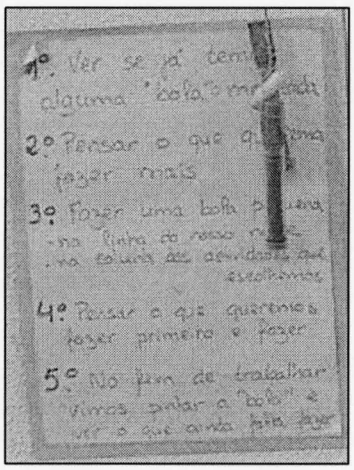


Picture 7.1. Amoreira 'Activities Chart'

The AC was a graphic representation of the classroom organization displaying the separate areas and activities (pictures and writing) children could choose to engage in on the top row and the children's names on the left column. Each child wrote his/her own name, using the colour of their nametags. The use of children's writing in the *names* column reveals an emphasis on individual children's ownership of the group tool, as well as an opportunity for children to use functional writing. Younger children were on the top rows so they could easily find the place to plan and evaluate. The right-hand column had a record (code) of the colours used in each day following a fixed pattern. The AC invited not only self-evaluations but also peer-evaluations of individual children and the evaluation of the group (see next section).

The use of one different colour for each day allowed both children and the teacher to identify when the activity was planned and when it was finished. If the circle line was of a different colour from its filling it meant that it was planned in one day and carried out in another one.

The AC rules script



1st Seeing if there is any circle marked;

2nd Thinking what else we want to do;

3rd Drawing a small circle

- in our name's row
- in the column of the chosen activity

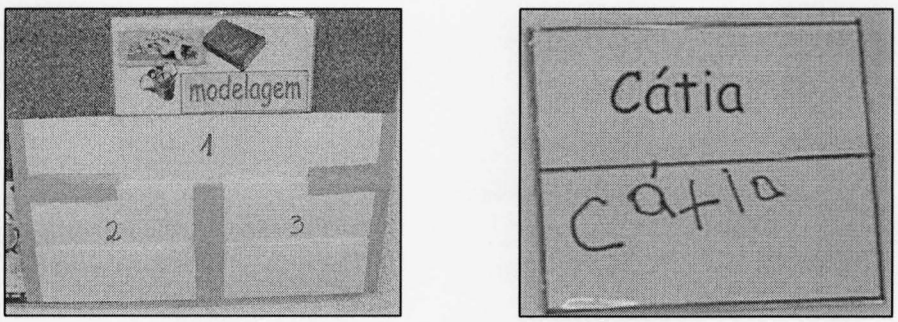
4th thinking what we want to do first, and do it

5th when finishing work we come to colour the circle and check what else we have to do.

Picture 7.2. The AC rules script

The AC rules were introduced in March after the first group evaluation of the AC (see following section). A set of five rules, identified with ordinal numbers and with words, directed the children both to action procedures and thought processes. The rules encouraged children's metacognitive processes - self-appraisal (rules 1, 2 and 5) and self-management (rule 4 and 5) - inviting children to stop, read the chart and plan what to do next. Planning should not be left to an impulsive choice, but rather the result of a thoughtful choice.

Areas' identification and nametags



Picture 7.3. Areas' identification and nametags

The identification of each area and the places available complemented the AC (using the same picture) in terms of children's choices. The number of places in each area mediated negotiations and planning. Moving their nametags into the places available at each area, helped children be more conscious about the activity they chose, its start and end and prevented some children from hanging around the classroom. All areas had more than one place (except the painting area because of space constraints), which

invited children to work together. The nametags had the name written on the computer and by the child. These nametags were changed twice during the year showing the progress on children's ability to write their name.

Inter-actions during A&P in Amoreira

In this section we will focus on how the teacher and the children act and interact in two situations of the A&P time: *using the AC* to steer choices during A&P time and *carrying out the activities and projects*.

Using the 'Activities chart'

A large part of the processes involved in using the AC was related to mastering the procedures and the actions involved in using them. This included semiotic actions - reading /understanding the identification of the activities on the top row, the name identification on the left column, the action of marking the point where the *name row* crossed the *activity column*, marking the chosen activity with an open circle and filling it up when finished. In the first month of implementation (November) the dialogues around the AC included a greater proportion of talk about the procedures and actions then later in the year when the focus moved on to the regulation process of children's choices. Carolina helped the children to master the chart and the procedures by modelling, questioning and directing the child ("where is your name?"), reminding them of the rules ("First you must see if you have any open circles"). After the implementation of the AC rules script (March), she also read the script for the children. The children became progressively competent at using the script autonomously, linking meaning with sign despite still not being able to read.

Using the AC as a piloting tool

Learning to plan using the AC was also to understand what a "good plan" was in this community of learning. The analysis of the negotiation/choice processes involving Carolina interacting with the children allowed understanding the criteria for choosing the activities and the learning discourse associated with it (Appendix 17 'Transcripts of A&P in Amoreira' 1 for illustrations; the criteria are ordered from the most frequently to the least frequently mentioned):

Carrying out what was planned before – "do I have any open circles?" (41 ref) - promoting responsibility to stick to plans, this was the criterion most often used by both Carolina and the children.

Free choice –" I want to go…" (31) – simply expressing the motivation to go to a particular area without any justification beyond. This criterion might had been used more often but not explicitly expressed and recorded.

Diversity of choices – "you don't have any circles in …" (25) - based on the principle of practising to learn, a good plan should be directed to the activities that were less chosen or where children had difficulties.

Time management – "do you think you will have time for another activity?" (12) - self-regulating plans according to the time available and the type of activities children want to engage in.

Goals and processes – "what do you have to do for…"(11) - planning the area takes into account set goals (what) and processes (how).

Collaboration with peers – "I am going with you!" (11) - choice of activities determined by the child's wish to do something with a colleague or by the teacher's invitation to collaboration and peer- tutoring.

Places available – "the office is full so…"(7) – planning taking into account the places available in each area.

Order of action – (2) Thinking about which activity to do first and second…

Despite A&P being a time for children's individual free choices, planning in the AC promoted children moving from immediate choices into adopting learning-oriented choices. The most frequently mentioned criteria were "Responsibility in carrying out what was planned before" and "diversity of choices". Responsibility was a strong feature in this community where children were considered as citizens and voice was associated with accountability. The classroom rule for planning which requires children to stick to their plans, gave children a sense of commitment in planning, rather than impulsivity. Some children started to think more carefully while planning, taking into account the time available and whether they wanted to engage in the areas they marked. This was not a simple process, especially for some children. Often throughout the year, children did not have enough time to do everything previously planned for the day. Due

to this rule, they had to go first to an activity that was planned the previous day and only then to the one they had chosen for that day. The lack of enthusiasm and vitality was, on some occasions, visible. This criterion created a concern with "doing things" and "having things done" which became sometimes more important than being interested and motivated for the activities they chose.

The diversity of choices criterion invited children to use the AC to regulate their involvement in a diverse curriculum. In the Amoreira classroom, learning was frequently associated with practice and gaining experience. At times however, this criterion could discourage the need to do things over and over again in order to engage in more complex processes. It is important to note that despite the explicit rules for planning reified in the AC script, most of the dialogues between Carolina and the children by the AC involved negotiation and flexibility rather than obligation and strictly following the rules. This was particularly evident in relation to "responsibility in doing what was planned" and "diversity of choices", which required that the child opted for one activity in which they were not interested.

Collaboration with peers was another feature of this learning community. Children often negotiated their choices with a selected peer. Carolina constantly invited different children to support, help, and teach each other, promoting the social responsibility for each others' learning which is a distinct feature of communities of learning (Rogoff, Matusov and White, 1996; Rogoff, Turkanis and Bartlett, 2001; Watkins, 2005a) also present in the MEM model.

Children's change in participation in planning with the AC

As Carolina supported individual children in using the AC, she involved other children in supporting each other, transferring responsibility and power to the children (in particular the older ones towards the younger ones). As the year progressed, the children took on such responsibility. In the next transcript, we can see how Mr (5:9) learnt to scaffold H (3:6) in planning, using the AC, and adopting some of Carolina's strategies.

> Mr asks H where he wants to go. H points to the constructions picture. Mr puts her finger at H's name and slides it along to the construction column, indicating the place. He marks it.
>
> **Mr** what else?
>
> **H** here, here! (pointing to cut & paste and then to painting)
>
> **Mr** and which one are you going to go to first?

H points to the constructions and goes off. Mr chooses to go to the table games. (Amoreira April)

The analysis of the language (and sometimes the gestures) children used while independently using the AC showed that children often engaged both in self-appraisal and self-management thought/attitudes as well as in regulating others' informed planning. What might have been understood as an ability that only older children could display, was actually emerging in younger children as the following two transcripts show.

Dg (5:6), Ad (5:11) and Fp (3:6) plan at the AC

Dg I want to go to the library.

Ad You've never been to the library! (points to Dg's column)

(Dg marks at the library and goes of. Ad also marks at the library).

Fp you've never been here, here, here. (points haphazard to different activities while she reproduces the activities regulative discourse)

Ad (taking seriously what Fp says) – I didn't go to drawing? Have a look! (points to the drawing cell at her row) and I've also been at painting. (Amoreira March)

And

H (3:4) wants to go to the make-believe area and knows already where to mark his circle. L (4:6) tells him that he had been many times to the home corner and counts all the registered circles.

L you have to go here, or here! (Pointing to the ones that have few or no circles. H says though that he wants to go to the make believe area and marks his circle. (Amoreira February)

The above transcripts show how very young children started to use the regulative function of the AC. Fl (3:6) reproduced the activities regulative discourse promoted by the use of the AC although she did not yet seem to fully understood or use it for herself. L(4:6) was already displaying an understanding of the potential of the AC to regulate choices as he assumed the position of the older peer-tutoring younger H(3:4) on how he was supposed to plan. None of these children (or other young ones) were seen displaying self-regulation in their independent planning but still they were starting to use it with others. The children's interviews revealed that only older children had an understanding of the AC as a tool to regulate their planning. The importance of triangulating data in order to achieve validity in research results became evident.

The planning criteria children used (interactions during planning in AC) when they were independently using the AC or supporting other children were: 'free choice' (14 references), 'diversity of choices' (8), 'responsibility in doing what is planned' (7), 'planning collaboratively' (7); the criteria less independently displayed were 'places available' (3), 'order of action' (2), and 'goals and processes' (1). These findings indicate that children understood the purpose of the A& P time as a time for free choice of activities, and also as a time for collaboration with peers and for 'responsible' choices towards learning, despite doing it at different levels.

Evaluating the AC in the group

The AC was changed four times during the year and before starting a new one, Carolina got together the group to evaluate it. The group evaluations of the AC had an underlying structure:

Introduction – focusing on the purpose of group evaluation of the AC
Following the AC rules script to evaluate
    Identifying problems (with the AC or with children's use of it)
        Understand origin of problems - possible reasons
        Finding out solutions to the problems (plans)
    Identifying progression
        Understanding origin of progress

The purpose of the group evaluation was expressed by Carolina in the introduction of the third evaluation, in May:

> We are going to do the evaluation: understanding who works a lot, who works not so much, what else you have to do ... We are going to see if it was worth being at school... We are going to say only the important things... the ones that help us improve! OK? Do you think that the map helps us? (the children say yes) is it helpful for our learning? Does it help us learn things? (Amoreira May)

By explicitly presenting the purposes of the group evaluation of the AC, Carolina linked the different actions children are engaged in every day (planning using the AC) to the broader collective activity of 'coming to school to work and learn'. By doing this she was moving up the focus from operations and actions with goals into the collective activity with object related motive (Leont'ev, 1981) and stressing the shared endeavour of the community (Wenger, 1998). She also conveyed views of 'working a lot' as the means to learn, the purpose to come to school, and evaluation (saying important things) as the means to improve (assessment for learning). Finally, she expressed the view that

the piloting tools had a functional purpose (helping us to learn) and were supposed to contribute to the shared endeavour of the community that she explicitly defines as learning.

After the introduction, Carolina usually identified a rule by which the group should evaluate how individual children performed.

> **Teacher** let's look here at H's row and check if he has any open circles…
>
> **Several** yes!
>
> **Teacher** do you think H came first and saw the already marked circles before marking a new one?
>
> **Several** No!
>
> **Teacher** He is still young and when he comes on his own, without our help so that he follows this first rule… and that's perhaps why he doesn't.
>
> **Dg(5:8)** but the diary is always on top of this…(points to the rules script) (Amoreira May)

The evaluation of each rule was not done for each individual child's row (difficult to achieve in a group situation). Carolina used some individual examples to promote group reflection, and evaluation based on shared criteria and shared responsibility. She often modelled the thinking modes that children ought to use to plan with criteria. *Lets see if Mn thinks, "let me see what I haven't done for a long time... before running into marking in the pretend play area... (Amoreira May)*

The first time they evaluated the AC the group reflected on the fact that some older children had fewer circles in their rows and they came to the conclusion that it was not a sign of not working but rather a sign of their engagement in sustained work, such as projects (Conversation with Carolina February). This was an important reflection as the criteria of "working a lot" or "doing lots of things" could undermine the value of perseverance and continuity in deepening learning by promoting quantity rather than quality.

During the last evaluation several children displayed self-appraisal - *T (4:3) When I was a baby I did many circles.... in other places... (rather than on her row)* and self-management comments - *L (4:9) "Tomorrow I will go to the library"*; *Td (5:3) "in the new chart I will start doing small circles"*.

The main goal of the evaluation was to identify the problems, to understand why they arose and to find ways of solving and preventing them in the future, thus promoting progression. The group evaluations focused both on the children's responsibility (e.g. to follow the rules) and on some contextual conditions such as the quality of the chart and its display (see Dg comment above), the quality and resources of the areas, school attendance and support of others. At Amoreira classroom, open criticism was promoted as the means to improve and sometimes this involved the children criticising the teacher or the classroom organization and materials, and so taking active participation in improving the conditions of the community.

At the first evaluation of the AC (January) they noticed that the Science Lab had few circles. Children did not seem to understand the point of going to the Lab, and what they could do in this area. The discussion led to the decision of relocating the Science Lab away from the entrance area, to enhance resources and to visit a chemistry lab in the main school in order to understand what a Lab was and what they could in it.

The second evaluation of the AC (end of February) gave rise to changes in the AC: they included the AC rules script to help children use the chart properly. They also decided that the children who found it difficult to follow their row without sliding into a colleague's could colour his/her row with the colour of the nametag. The oldest children decided they did not need to do this (conversation with Carolina, March).

Progression was also emphasized during evaluations of the AC. Children were acknowledged in their efforts to pay attention to planning and choose a variety activities from all the available ones.

Carrying out activities and projects

Field notes of A&P time as well as transcripts of some video recordings were coded according to 'teaching episodes' and 'children playing /working together'. 'Teaching episodes' included situations where Carolina was interacting with a group of children with an educational focus (rather than managerial or social) and constitute the basis for the first part of this analysis. A second section will look at "children playing/working together", the processes they engage in and how they use language to negotiate meanings, collaborate and think.

From the teaching episode analyses some specific features emerged showing how Carolina used her interventions to build up a community of learning: supporting

engagement with materials and practices, promoting learning through practising, engaging in meaningful activities, promoting learning through registering, questioning and assessment for learning and building up community.

Supporting engagement with materials and practices

Carolina's interactions with the children frequently involved talking and demonstrating the actions or experiences they could engage in in each area and the materials available or needed (Appendix 17 'Transcripts of A&P in Amoreira' 2) for example: using the typewriter; using the wire connections in the Science Lab; writing the date for a child. The focus on actions that characterised Carolina's interaction with children promoted children's involvement in doing things, working and practising. This kind of talk did not exclude talk that was directed to engage children's thinking. Most teaching episodes involved a combination of the two types of talk. Only in the first month of fieldwork was there a clear domination (+ 9) of action talk over thinking talk. From February on thinking talk episodes surpassed the action talk ones.

Practise in order to learn was one of the most commonly used discourses in Amoreira as we saw before in planning using the AC. This discourse promoted in some cases narrow learning processes, as a repetition of actions disembodied from any meaningful purpose or motive.

> Carolina approaches Mr (5:9) who is cutting in the Multipurpose area.
>
> **Teacher** What is the cutting for? ..... It's to practise, isn't it? To cut really well ... (Amoreira April)

Such a narrow view of practice through repeated actions, was particularly present in 'Cut & paste' activities but never in the 'Office' or in the 'Lab'. Later in the year Carolina became conscious of such mechanical use of cutting and started to encourage some projects in which cutting had a meaningful purpose (for example in the animals file and the sports book projects). In the last interview (May) she explained her understanding of this 'practice' discourse in the classroom.

> Perhaps I am saying 'treinar' (practising) and I am not adding much more but the meaning I want to put across is: if we do it more times, we'll succeed. For instance, Dg is a very bright child... in language he is excellent but in terms of fine motor skills he is very weak. And he knows that he has some difficulties... and now he has high self-esteem and knows that if he practises he will improve. He wants and chooses drawing and cutting because he knows that if he practises he will manage

> to do what he wants. In the beginning he would run away from drawing because he thought he was not able to do it. He is very critical and he was always frustrated with his products. Now he knows that he can overcome this. (Carolina #4)

Carolina encouraged children to face difficulties and to overcome them. She supported children according to their needs, including mastering specific skills (Appendix 17 'Transcripts of A&P in Amoreira' 3). Her encouragement of 'practise' aimed to get the children engaged in facing and overcoming their learning problems, therefore building up their confidence and resilience.

Engaging in meaningful activities and projects

It was Carolina's intentions that children's learning experiences move towards the emergence of semiotic activity embedded in meaningful activities. To foster such learning, Carolina used expressions such as "finding out" or "experiment" (rather than play with) in the Science Lab; "recording" or "writing" at the Office; "who are you?" (pretend) in the Home Corner and modelled specialised jargon/language (for example: attracts instead of sticks; circle instead of ball; triangle instead of hat). She embedded concepts and intellectual tools (such as classification or ordinal numbers) in meaningful activities, helping the children to understand their function (that is helping the children insert the animals' names in the appropriate sections, helping the children to organise the order of actions). She promoted practices connected with different goals and ways of engaging with the world (science, writing and reading, maths, arts, drama) and made particular use of specific tools such as types of thinking, specialised language as well as material tools.

> T (4:2) and C (4:2) are at the Office writing in their notebooks. Carolina approaches and asks them what they are doing.
>
> **T** It's Ms Aldina's text.
>
> **Teacher** Oh, you've written already!... and what have you written? Show me.
>
> **T** I wrote baker...and the baker's name...
>
> **Teacher** Mr. Arthur?
>
> **T** and I wrote Ms Aldina.
>
> **Teacher** What else? (Carolina writes at T notebook what she says)
>
> **T** I wrote the things...
>
> **Teacher** What?
>
> **T** the dough

Teacher ...and what else?

T that ... like this...(gesture of hands going around)

Teacher Oh! The mixer. Very well!

(Amoreira April)

The above transcript is an illustration of how very young children learn to attribute meaning to writing and learn to write with meaning, considering it as a communicative activity. Carolina's first question elicits T to share her meanings, holding positive expectations of T's understanding of writing (despite knowing that it is only scribbling). T's explanation starts with a comprehensive clarification of the goal of the activity: it's Ms Aldina's text! The previous day the children visited Ms Aldina's husband's bakery to see him make 'Folares' (traditional Easter cake). As children wrote texts to register and communicate their own personal home experiences, T was independently using this practice to record in her notebook what had been a significant event for her. Later in CT when T presented her text to the group they decided to write a letter to Mr. Arthur thanking him and they asked T to include her text in this letter.

As the year went by, Carolina started to promote children's engagement in small projects using the MEM framework to structure their goals and processes and promote sustained involvement and self-regulation in the production enterprises. She used 'what' 'how' and 'who' questions; she often wrote down the project structure, using ordinal numbers to indicate the sequence of actions; this written tool was laid on the table next to the children and the materials helped them to be aware of the structure of actions that together contributed to the final goal, going back to it each time they discussed what to do next and who was doing it.

Promoting learning through registering

Recording children's experiences, part of the MEM culture, is used in many situations: children's texts, group records of outings, records of the cooking process (recipe), the 'photos' of junk modelling products, and the records of the Science Lab experiments were examples of such tools (Appendix 9 'Children's records Amoreira'). Carolina used them with many different purposes: linking action with reflection, bring consciousness to children's activities and processes, producing memory records to disseminate and communicate children's experiences. She devised special record sheets according to need.

C (4:1) is playing with magnets in the Science Lab

1 Teacher what are you doing?

2 C I'm going to see those who stick to show to colleagues.

3 Teacher So don't forget to do your record, so that you can explain to colleagues what you found out!

(She then helps C finding a good place to work (suggests opening the box from the other side so that she has more space) and helps her to settle comfortably on the bench.)

4 Teacher you can also try other materials from the classroom. (Carolina takes one record sheet from the shelf) Now… you write your name here and I will write the date for you. "29th March". (Carolina gives the record sheet to C and leaves)

C starts to write her name paying attention to the nametag, which is displayed in the area identification folder. When she finishes she puts the record sheet aside and starts to experiment with all the materials, separating them systematically by putting each group on top of each box. In the end she grabs the pen and starts to draw only the ones that "did not stick".

5 C The horse now… I've done the horse…

She is very involved in her systematic activity.

After finishing drawing the ones that did not stick, she clears all the materials putting them in the box and runs to show her record to Carolina.

6 C Carolina, I've done it! (showing it)

7 Teacher Ok darling. Do you want to show it to your colleagues?

C says ' yes' and she puts her record on the big table and seats down. After a while she runs to the AC and colours her two activities: Modelling and Lab.

(Amoreira March)

C's activity in the Lab went beyond the experimentation of the materials' reaction when in contact with a magnet. While recording the results by drawing on the record sheet, she reflected on what she did and clearly used language to monitor her action and her thinking (Vygotsky, 1978) through self-appraisal and self-management (line 5). She was very involved all the way through and she sustained her interest by having the goal of showing others what she did. From the observation we could not understand if the reason why some materials stick and some didn't ever puzzled her. Carolina did not prompt C's exploratory thinking any further, postponing this discussion for the CT. There, C explained that the iron (sic) ones stick and Dg said: "unless the Key". Carolina

clarified: "some metal ones do". Through recording what they did in some areas, with the purpose of communicating, children engage into semiotic activity transforming play into learning (van Oers, 1999b; 1999a).

Questioning and assessment for learning

Carolina used different types of questions during A&P teaching episodes: questions to gather information (41) allowed children to share their understanding with Carolina providing information (for example, explaining what they did), focusing on a common ground to interact by recalling information. The questions about processes and strategies (40) and negotiation questions (17) focused the dialogue on self-regulation of the learning processes. Questions about purposes and intentions (31) induced children to display or look for meaningful activities with a personal or social purpose. Questions that elicited rationales (13), about feelings and understandings (9) and predictions (7) were less frequent.

Carolina took very simple opportunities to deepen children's learning and thinking, and engaging in sustained shared thinking. She challenged children's thinking and learning (for example: phonological awareness; word recognitions; classification) by embedding in meaningful situations (example in Appendix 17 'Transcripts of A&P in Amoreira' 5). But these episodes were not so frequent as Carolina moved across the classroom areas focusing her dialogues more in promoting engagement in goal-oriented activities and self-regulation of processes.

Another type of questions analysis showed a predominance of closed questions (65%) against open questions (35%). Such frequencies when compared to some research on classrooms interactions (Galton et al., 1999; Siraj-Blatchford and Manni, in press), can be considered positive and showing a general concern with engaging children's thinking during their hands-on activities.

Carolina used feedback to extend the flow of the interactions (see T in the office) and to deepen learning by 'constructing the way forward' with children (Tunstall and Gipps, 1996). Very occasionally she made evaluative comments (always task centred) and on such occasions, they came next to or after descriptive comments either positive or critical. She encouraged the children to display positive expectations, offered criteria for learning and suggesting strategies.

Js (4:8) shows her drawing to Carolina. Carolina looks and comments on Js drawing showing it to other children.

Teacher Look! Js did very angry men! Can you see his open mouth and the teeth showing?

Then she invites Js to colour the men as she did only the outline. Js colours part of it and shows to Carolina.

Teacher You see? A very nice red hat! And now you can also colour his face. You choose a colour for his skin. Was he dark or white?

Js Dark.

Teacher Dark? So let's look and choose a colour for you to colour a nice dark skin.

They discuss together which pencil is more adequate and Carolina leaves Js carrying out her drawing. (Amoreira October)

One of the most striking aspects of Carolina's particular teaching style was her rather neutral approach towards children's behaviours or performance. Her positive and affectionate relationship with the children was not anchored in displaying personal satisfaction such as kissing a child when he did a beautiful drawing or being very angry when a child did not behave. Her comments were mostly task specific, not general appreciations of the 'goodness' or 'badness' of the child. This feature was already present at CM particularly during the discussions of the 'we liked' and we didn't like' columns.

Building up a community

One of the main emphases in Carolina's interactions with the children was on the social organization of learning promoting community building. Such purpose was realized in different ways: promoting the participation of all, being very attentive to the children who looked less engaged (Carolina to H (2:11) 'Come, we need your help!'), and constantly inviting children to talk to each other, to teach, support or demonstrate (peer-tutoring).

An important element of such community building was the way she managed children telling on others: instead of acting herself, she always invited them to take responsibility for regulating each other's behaviour, distributing and diluting her power in the classroom.

Dg (5:3) Carolina, Carolina! T (3:10) is licking the table

Teacher Dg, why don't you tell her that? You can say: T you can't lick the table which is covered in germs. You can go and fetch a cloth, can't you?

(Amoreira Nov)

Carolina modelled the way one should deal with this kind of misbehaviour: instead of just telling them not to do something, one should explain why and offer alternative behaviour.

Children working and playing together

Children enjoyed the company of each other to work and play together or side-by-side. They acted as companions, engaging in shared humour, gave support, and also acted as teachers to each other by engaging in many peer-tutoring interactions.

Amoreira children also engaged in some disputes and sometimes these become conflicts: searching for alliances in the class, or control over the activity; teasing each other; fighting for materials or space; telling on others. These conflicts however were not frequent during A&P and they faded away as the year progressed. An analysis of field notes related to children's playing/working together during A&P coded children's disputes/ conflicts and collaboration/ cooperation. During the first months (Oct, Nov and Jan) conflicting episodes surpassed collaborative ones (+2, +5, +2 respectively). From February to May, however, the number of collaborative episodes increased and showed greater prominence than conflicting ones (+4, +6, +9, +9). These results show a significant progression in the community ethos. The support they got from Carolina in teaching them to deal with problems, as we have seen above and in CM might have impacted on the children's attitudes to each other. Mn and T were two assertive and short-tempered girls. They got involved in conflicts more frequently than others. The group, modelled by Carolina supported them in becoming more able to negotiate and to give up their impetuous behaviour. This was a laborious process that was always based on respect for and acceptance of the individual children, despite a clear criticism of some of their behaviours.

Working in cooperation towards a common product was something Carolina encouraged but something the children did not find easy to achieve. When they had to build something in common (playing the same game on the computer, doing joint junk modelling, coordinating participation in projects), disputes arose more often. The next

two transcripts show how two of the older boys changed their way of working together on a common product.

> Dg (5:3) and Jr (5:10) are trying to do a junk-modelling Robot at the Multipurpose area. They both wanted to do one each, but Carolina suggested that they should do one collaboratively.
>
> After cutting a piece of self-sticking paper Jr tries to take out the back paper at the back. Margarida offers to help him. Dg says he is going to do it and he gets very angry because Jr doesn't let him do it. Each one tries from an opposite side. In the end Jr gets it and Dg is going to paste it into the box.
>
> **Dg** This is not the good size. Needs cutting.
>
> They both get the Robot and fight. Dg is very angry. Carolina approaches and tells them they have to speak with each other. They have short periods of collaboration but later on...
>
> **Dg** I don't want it there! (Dg un-pastes the paper Jr had pasted)
>
> **Jr** I am getting annoyed!
>
> **Dg** The Robot is mine and I am doing it!
>
> (Amoreira Nov)

Later on...

> Jr (6:3) and Dg (5:8) are cutting A5 file cards to do the Animals file project. They have to cut them from big pieces of card and find it difficult to measure and cut them all the same size. Dg takes one of the sheets cut to size and puts it over another to mark with a pencil where he has to cut. As he draws the line his pencil gets on top of the model and in the end he doesn't get the line he wanted.
>
> **Dg** oh Jr! I've got it wrong!
>
> **Jr** so, we will do it again!
>
> Jr adjusts the edges of the two sheets as Carolina previously taught them, holds them together and Dg draws the line. Dg then gives it to Jr to cut. Dg starts to do another one as Jr cuts.
>
> (Amoreira May)

Some of the most passive children in the classroom (V, Mr,) changed their involvement, becoming active participants and assertive when playing or working together with a peer. Mr was a withdrawn girl, often engaged in repetitive activities and avoiding being the centre of attention and putting forward her will. As the year progressed she flourished and adopted a more assertive and active participation in collaborative activities.

Mr (5:9) and Ad (6:1) doing a construction together

Mr leads the construction but Ad gives also some ideas. Although, Mr discusses each one before accepting them.

Mr Ah, that's right!

They show great enthusiasm with the result.

Mr let's do something to make it better…

As they carry on they keep talking, negotiating, commenting and sharing common meanings to produce a common final construction.

(Amoreira April)

What was clearly seen in the Amoreira classroom was the children's increasing ability to use language to negotiate meanings, to direct and coordinate each other's actions, and to put forward their points of view without constraints or the intention to control others. What Mercer (2000) defines as explorative talk is this type of talk where children's common goal is to produce the best result by cooperation and not by gaining power over peers or presenting themselves as the clever ones.

7.2. Activities & Projects in Magnólia

7.2.1. What did children and teachers do during A&P?

During this time the children got involved in individual or small group activities they had planned during the MCM and had registered in the 'Diary' and 'Daily Plan' or in the 'Activities Chart' (AC).

The analysis of the activities registered in the 'Diaries' (9) showed that most activities were related to projects (around 50%). Secondly, there were goal-oriented activities in different areas of the classroom (around 30%). Such activities could involve experiments, writing a letter or a recipe in the office, illustrations for the newspaper, height strips to find out who was the tallest in the classroom or doing rhymes with names. Activities related to preparing and planning activities such as PE and cooking summed up 8% of the references, and 6% of activities related to correspondence. As expected, a small number (+- 2%) of activities were related to outings and visits.

The centrality of projects and small goal-directed activities characterised a community centred in inquiry and production processes following the children's interests and queries. During fieldwork, the children were involved in 17 projects including 11 *inquiry* projects and seven *production* ones. One project included both inquiry and production ('Our school') and two inquiry projects had also an *intervention* component (the 'teeth project' and the 'fireman project'). Three of these projects involved the whole group (two theatres and 'our school').

The analysis of the ACs (7) (Appendix 16 'Analysis of the Activities Charts' 4) indicates a prominence of the Arts activities (213 mean number of activities per month), within which drawing was the most frequent (90). Reading and writing activities (99) and Play activities (92) were the second most popular. The activities with a lower frequency were the Computer (5) and the Experiments (11) and some activities that required an adult's involvement to prepare specific materials - Digitinta (8), Printing press (9), Monotipia (9). The frequencies of these activities reflect the creative environment of the Magnólia classroom and its emphasis on emergent writing and, at the same time, on free play activities.

7.2.2. How did participants perceive these activities and their main goals?

Teacher's perceptions of A&P in Magnólia

Patrícia defined A&P time as the time for carrying out the activities the children chose in the different areas of the classroom. Children's choices and interests were for Patrícia an important condition to ensure a deeper involvement in their learning (Patrícia #1). According to Patrícia, children should move from explorative play and activities into purposeful and goal-directed activities where their actions and thinking are linked together. She saw her role in supporting the children's activities as a key factor for such progression.

> It is at the end that they try to put intention into what they do. As they are older and having already passed through the exploration phase with the dough, I try to see that they have a concrete project and are not just experimenting and experimenting. I help them to organize their thinking. Pt(4:7) had a doll and I asked her what she wanted. Principally I listen to them and from there, based on what they are doing, question them and support them. If it weren't for such questions, they would not think and would end up always doing the same thing. I try to put them in cognitive conflict so that they see things from a perspective that they may not have considered. B (6:0) made a figure and put it in the middle of the Picture. I asked him if he didn't want to do the ground with some dough and he said no, that he (the figure) was jumping and therefore was in the air. So, it is always based on what children are doing and always respecting their decisions. Our role is to question, provide cognitive conflict and provoke thinking and reflection about their action and activities.
>
> (Conversations with Patrícia April)

Patrícia mentioned age and *passing through an exploration phase* as a prerequisite to start challenging children's thinking, recognising that children need time to get involved with the materials without much adult intervention. At the same time she stressed the importance of questions to promote reflection and cognitive conflict which enriched children's learning.

In the teacher's interviews and conversations, Patrícia spoke extensively about the importance of projects in children's learning. In her view projects were very important as they provided integrated experiences within different areas of the curriculum as well as opportunities for children to learn in cooperation.

> Project work is fundamental to me because it is based on things that are significant to the child: the questions children ask and bring to the classroom will cover different areas of knowledge. It is a privileged way to write, to read, to do art activities, to work on maths concepts and knowledge of the world. (Patrícia #4)

Concerning the use of the 'Activities Chart', Patrícia saw its main function being to evaluate what children had been doing, and supporting children's consciousness about what they did and what they planned but did not carry out. In Patrícia's view, this group did not need to be invited to use the evaluation AC to inform the planning AC, as they were (naturally) *"an interested group and a participative one. They like projects very much and also they like to illustrate...*(Magnólia 4). Such a regulative process was only done with the ones where she believed it was necessary.

Patrícia believed that curiosity is the basis for learning and that if children found another interest during AP time they should be encouraged to follow that interest rather than stick to the plan (Patrícia #1).

Children's perceptions of AP

During the children's interview about "routines, piloting tools and group situations" all children mentioned that in the morning, after MCM they would have a period where they would *play* or *choose to do different activities.*

Five pairs of children (mixed ages) identified this time as a time to play:

> **T (6:1)** after the meeting we go and play and then we have fruit...

Also five pairs said they would choose and mark the "activities".

> **C O (6:4)** After the meeting we go and do the things we want

One child referred to A&P as the time to do *"important things like projects".*

> **J St (5:8)** and then, the only thing that is important is to do projects.

A substantial number of the Magnólia children defined such activities as 'play'. Only one child used 'work' to define the activities in which they got freely involved. In another of the children's interviews, 'coming to school', the Magnólia children associated the purpose of coming to school with play (35%), learning (35%) and doing things (30%); only 9% associated it with 'work'.

Concerning the 'AC', all but one of the Magnólia children recognised this tool as the one they used for choosing and evaluating activities.

Some children (3 pairs) expressed their understanding of the tool by referring to the actions and operations involved in the use of the chart.

> **N (4:10)** we mark, for instance C O is the last... the red circle...

Five pairs of children referred to this tool as the one they used to choose the activities they wanted to do.

> **C O (6:4)** This one is when we choose the things

Four pairs mentioned that the AC helps them carry out their plans.

> **N (4:10)** we keep following.... We go and do our drawing and then we go there to see ... and then if we don't, we forget what we're going to do.

In terms of using the AC as a self-evaluation tool, four pairs of children mention that they use it to see what they have done.

> **Dn (5:10)** it is for us to know what we did. We look and then we mark in here the small circles in here.

Also four pairs mentioned the AC as a tool for adults to evaluate what they have been doing.

> **J Sv (5:3)** it's what we have done so that the teachers know.

Finally, only two pairs of children (six-year-olds) mentioned the use of the AC as a tool for regulating planning, based on evaluation.

> **Fd (6:0)** and it's to write as if we put many times that we went to the home corner then we cannot go. That's why some can't go... and if we put many times in drawing we cannot go anymore, also.

7.2.3. Participation in different activities in Magnólia

The analysis of the AC by age group gives a sense of the different experiences children of different ages had in the Magnólia classroom (Appendix 16 'Analysis of the Activities Charts' 5). Two age groups were used in the analysis: younger children - 3:9 to 4:7 years, and older children - 4:10 to 5:8 years old in September.

The analysis of the mean number of activities per age group showed that three-year-olds tended to engage less in 'Reading and writing' activities (26 – 32 individual children mean number of activities in each age group) except in the 'Library' (12 - 11), and in 'Art' activities (66 – 72) except 'Painting' (12 – 11) and 'Cut & Paste' (10 – 8). They also engaged less in 'Experiments' (2 – 5). Three-year-olds engaged more in 'Games with water' (12 – 8) and (table) 'Games' (24 – 22) than the older ones. The balance between the two age groups was more even in play activities such as the 'Home corner' (10 - 10) and 'Construction and garage' (19 - 18).

As has been shown before (CM), children's participation in goal-oriented activities planned during the CM and registered in the 'Daily plan' varied with age: the older children showed significantly greater participation (mean of 19 references per child ranging from 8 to 30) than the younger ones (mean of 10 references per child ranging from 3 to 17). An analysis of how the two age groups' participations evolved throughout the year showed a slight increase in participation by the younger ones (3.1 mean number of goal-oriented activities registered in 'Daily Plan' in the first term to 3.7 in the last term) despite their involvement remaining significantly lower than the older ones (6.7 to 5.6).

Older children got involved in a mean of 4.6 projects each and the younger ones in a mean of 2.3. The analysis of the progress in participation in projects was not conclusive. Some of the older children, the ones who did not participate as often in the group discussions, also participated less in projects - Gl (5:4) and A (5:3) 1 project; E (5:3) and Dn (5:2) 2 projects. As in the Amoreira classroom, participation in projects seems to be related both to age and to the children's characteristics.

During A&P, Patrícia was mostly involved in supporting children's goal-oriented activities and projects and she was often seated with a small group of children doing a project for sustained periods. Patrícia never got involved in the 'Home Corner', 'Games with water', 'Games' and 'Constructions and garage'. In these areas she provided occasional feedback, managed behaviours and regulated the number of children in each area.

Rosa supported children in 'Arts' free activities ('Cut & paste', 'Drawing', 'Painting', tapestry), and 'Games'. She provided children with good material resources (preparing

paints, sharpening pencils) and encouraged children to sustain involvement in the activities.

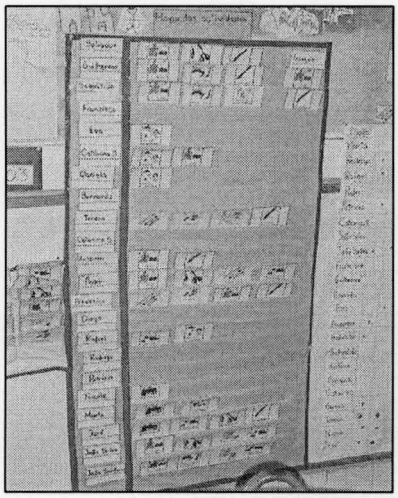
7.2.4. Mediated inter-action in Magnólia A&P

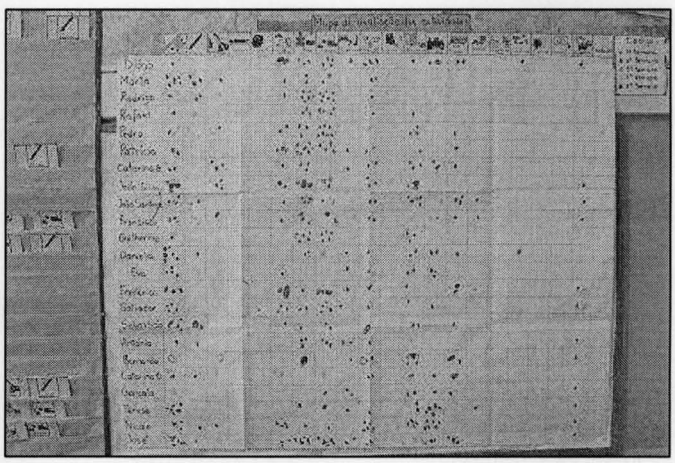
As already described (chapter 5.2.) the Magnólia classroom was a beautiful well-resourced and spacious environment offering the children good conditions to play and work in varied activities both collaboratively, alongside each other, or with the teacher.

The piloting tools

The 'Activities Chart'

The 'AC' in the Magnólia classroom was split into two different charts: the 'Planning AC' and the 'Evaluation AC'. This reconfiguration of the piloting tool, developed within the institution, aimed to simplify the reading of the data as when children planned the activities and did not carry them out, several open circles remained in the chart which made the evaluation confusing. By splitting the two actions – planning and evaluating - the register was, according to Patrícia, clearer in showing the activities that the children actually did (Patrícia #1).





Pictures 7.4. and 7.5. Magnólia Planning and evaluation ACs

The 'Planning AC': children chose the activity cards from the pockets on the right-hand side and displayed them in their name row folder, expressing how many things they wanted to do and the order in which they would be carried out.

The 'Evaluation AC': This chart was designed in accordance with the MEM model. Children registered what they had done during the day, crossing the row with the column (name and activity). A colour code displayed on the right-hand side permitted

differentiation of activities done in different weeks. The right-hand column, named "assessment" was meant to record the contracts between the teacher and the children after a formal group assessment of the activities, but it was never used.

Inter-actions during A&P in Magnólia

This section will look at the inter-actions in two different situations occurring during A&P: planning and evaluating using the 'AC' and carrying out the planned activities and projects.

Using the 'Activities Chart'

In the morning children planned their activities using the 'Planning AC' and at the end of the afternoon they registered the activities they did during the day in the 'Evaluation AC'.

Planning

Children made their plans mostly autonomously, sometimes with other children and on some occasions were supported by Patrícia. The children mastered the actions of planning very well, not relying much on teacher support.

Some children (sometimes near half of the group) started their activities without planning on the 'AC', revealing that in practice they did not envisage the use of the 'Planning AC' as essential for their choice. Moreover, they did not go back often to use it when they became interested in different activities during the day.

Using the 'Planning AC' as a piloting tool

The analysis of the interactions between Patrícia and the children during planning (despite being few) reveal some criteria for planning (Appendix 18 'Transcripts of A&P in Magnólia' 1): the child's interest (free choice – 10 entries) as well as motivation to engage with peers (10), was what in most instances determined the planning. Children had also to consider the necessary conditions for their plans - places available (8) and time (5), and to structure them sequentially (order of action – 5). The concern with the diversity of choices (5) was scarcely present in the planning interactions. On some occasions there was an implicit rule that children should not plan only play-type activities (Appendix 18 'Transcripts of A&P in Magnólia'1), which some children came

to recognise, but which was never explicitly expressed and adopted as a criterion by the community.

The analysis of the children's language or interaction when planning on their own or with peers, shows the use of three planning criteria: 'free choice', 'collaboration with peers' and 'places available'. This would seem to indicate that children themselves do not use the 'Planning AC' based on what was registered on the Evaluation AC'. These findings are coherent with the teacher's perceptions that children's interest should be the main basis for planning and also her undermining the role of the AC in promoting learning oriented planning, and regulating children's curriculum.

Marking what we've done and regulating the curriculum

Registering in the 'Evaluation AC involved taking the cards from the 'Planning AC' and searching to the place where children's names crossed with the activities columns. Marking on the 'Evaluation AC' posed some problems for the children due to the size of the chart. Contrary to the operations involved in planning, during the evaluation the children sought Patrícia's support. Her support varied according to the child's needs. The analysis of the interactions during evaluation in the AC showed that by the end of the year a great amount (57% in March and 35% in April) of the talk was still focused on actions and procedures.

The processes involved in evaluating were mainly recalling the activities that were carried out during the day (40 references), and marking them down on the 'Evaluation AC'. Patrícia asked the children to check which of the planned activities were completed (30), linking the evaluation with previous plans. However, there were no reflections about why some activities were not realized.

> Fr (5:0) comes and Patrícia gives him the cards he had on the planning chart. "See if you did them all!" Fr " yes...office". Patrícia gives him the pen and he marks with her help in crossing the row with the column. She kisses him. He goes on to mark other activities and Patrícia indicates the place. (Magnólia November)

Patrícia valued the children who did many things, helping them acquire a sense of themselves as active and involved. She greeted individual children by kissing them (6) and saying *"well-done!"* or *"My little princess!"*

Challenges to progress or to diversify the opportunities for learning were only present in a few (3) interactions between Patrícia and the children, which were rather limited in promoting the use of the AC as a piloting tool for learning.

> **Teacher** Pd (4:7) you have so many circles at garage that there is almost no space left. Do you know what this means? That you've been to the garage many times; but look at drawing with only one circle...none in painting nor in play dough... you have to start doing other things. (Magnólia October)

Planning and evaluation were separated not only by having separate charts but also by the space in time that separated the two actions: one at the beginning of the morning and another at the end of the afternoon. The plans informed the evaluation but the evaluation did not inform planning. The AC (both planning and evaluating) in Magnólia classroom was used mostly to support children's individual choices and to give them a sense of themselves as active and involved in the different areas of the classroom, but not so much to foster responsibility, self-regulated learning and children's change in participation in activities they were not naturally motivated for.

Carrying out activities and projects

This section will look at the inter-actions that occurred when Patrícia and the children carried out their activities.

Some key interactive teaching features emerged from the analysis of 'teaching episodes' during A&P: supporting the intellectual and social organization of meaningful activities, extending children's learning, documenting children's learning. Complementary to these features of Patrícia's teaching, we will show how she used questions and feedback during the running of A&P.

Supporting the intellectual and social organization of meaningful activities

While the children went to different areas, Patrícia approached groups of children, who planned goal-oriented activities, and helped them start working. She helped them settle and understand the motive of their activity and helped them organise around the actions necessary to achieve their goals, structuring the order of actions and helping them start.

> (Apple jam recipe 1st extract) A group of three children met at the office to write a recipe.
>
> **Teacher** So, you came here to work... to do what?
>
> **J St 5:7** So that we will make the jam.

Teacher So, you promise your friends to write the recipe to send to the kitchen. If you don't do it nobody will be able to make the jam. So....

Patrícia helps them organise and asks the children what they will write.

Teacher What do you think is written here? ...and here? The children try to figure out the words based on what they know is likely to be written there, using the drawings of the ingredients and on some knowledge of letters. They conclude that they need three ingredients to make the apple jam.

Teacher So, you will have to write apples, water and sugar so that in the kitchen they understand what you are asking for... first you have to write the recipe's title "apple jam" and then, the ingredients apple, water and sugar.

(Magnólia April)

Patrícia's emphasis on the activity's motive and its relation with the actions (writing) for its realization is in accordance with her views of learning being grounded in meaningful and purposeful activities. She also reminded the children of the importance of what they were doing towards the group, stressing social responsibility. She ensured that school activity became linked with the social practices of real life and not enclosed in a specific learning action disconnected from social meaning.

Patrícia also helped the children organize the order of actions and the division of labour, scaffolding children's collaborative work.

Extending children's learning

Patrícia's interactions with children were not only organizational in social and intellectual terms but also instructive. While she carried out different goal-oriented activities with the children, she was keen to extend their knowledge in different areas.

Collaborative art panel

Teacher with E (5:4), C O (5:9), T (5:6) and Dn (5:3) at the painting area. They are putting together an A3 panel made out of several play dough figures and start by organising them in groups:

Teacher what do we have here?

Together they nominate flowers, animals, a sofa and human figures.

Teacher So, where might these things go? (she holds the sofa)

C O at home.

Teacher at home, isn't it? And where can we make the house?

C O suggests an area and Patrícia moves the sofa into that area. They then negotiate the different locations for all the pieces and what each of the children is going to paint (as scenery).

? We can paint now!

Teacher Yes! Cause our paints have beautiful colours.... Now you have to agree on what each of you will do. You can't do everything at the same time.

...

C O (draws a square around the sofa) That's it!

Teacher Look ... the house hasn't got a roof, a door. Are the walls of the same colour as the roof? (C.O. adds details to her drawing)

Patrícia reminds Dn that the grass has to reach the animals and the flowers otherwise they will get hung in the air. She holds the brush, demonstrates and passes on to Dn who continues to correct, painting green towards the play dough pieces standing on the grass. Dn says she wants to do an ant but that she can't do it. Patrícia encourages her to do as she knows and then suggests she asks T for some help. Dn asks and T holds the brush together with Dn and they do an ant together.

Patrícia comments on the process. She suggests using more paint when the line is not full. "We are not saving any paint here! We have to use more paint to make it beautiful. (Magnólia October)

This transcript is very illustrative of how Patrícia worked with the children. The goal was to put together the children's individual play dough figures into a beautiful panel (often displayed throughout the 'crèche' building). Analysing Patrícia's pedagogy, some underlying intentions concerning learning processes emerged: fostering children's negotiation, collaboration and peer-tutoring; fostering children's thinking (analysis of the figures, creating a scene from these figures; providing rationales for actions); supporting children's mastery of material tools (technical knowledge).

Patrícia's sustained involvement in supporting children's goal-oriented activities provided many opportunities for sustained shared thinking (Siraj-Blatchford et al., 2002) combining teaching strategies, such as questioning, which provoke thinking, modelling, suggesting, demonstrating and extending, and also some more direct teaching. Patrícia assumed the role of the most mature partner while leaving some degree of participation and agency to the children.

Patrícia got involved in deepening children's learning by supporting processes of inquiry frequently present in the Magnólia classroom projects (Appendix 18 'Transcripts of A&P in Magnólia' 2). Patrícia helped the children focus on the questions they asked, invited them to advance hypotheses and to search information. The use of books to know things was a frequent learning strategy for project work (included in 13

out of 17 projects). In the classroom library and in the school library they had many resources to support children's inquiries. Drawing was a complementary strategy through which the children explored their ideas, recorded what they knew or saw and represented what they had discussed (used across all projects). Less frequently though the children used experimental strategies to answer questions. People such as experts, parents, adults in the school or other children, were also sources that children used to answer their questions.

Writing and language

The constant use of writing in the Magnólia classroom, to identify children's work with name and dates, to record what was agreed, said, found, read, or communicated with others (letters, recipes, documentation) not only by the teacher, but also by the children, gave the children ample opportunity to get engaged in writing activities and to reflect on language and writing. Children's 'free texts' were registered and illustrated during A&P time. On many occasions Patrícia worked with the children in extending or reducing a text through its analysis. Children learnt to think about language, to reflect and to become able to critically analyse each other's texts and ask questions that would help to clarify the narrative: *Fd (5:11) "I think Dn's text is too small! (Magnólia April) B (5:6) "Here you repeat the same words, you see?" (Magnólia October); J St (5:1) "How did you travel to the Aquarium?"(Magnólia October).*

Patrícia fostered children's reflection on language and writing in diverse ways: questioning how to say things in the past or future, in the plural; inviting the children to discover similarities and differences between words, inviting them to infer messages from print, playing with and discovering similar words meaning different things, and so on. All these processes were documented and displayed in the classroom (Appendix 10 'Documentation in Magnólia').

Documenting children's learning

Patrícia dedicated long periods of time to documenting the children's learning. In the afternoon she was mostly devoted to putting together the children's productions (mostly drawings, paintings and writing) with her narratives of the processes (recorded in her notebook). The children participated also in producing such documents, engaging in semiotic activity.

(Patrícia is next to the snails project group doing the project book)

Teacher and what happened then? We talked at the meeting wasn't it?" (The children cooperate with Patrícia recalling and writing down the process. She encourages individual ideas and suggestions by writing their names)

Dg. I said that!

Patrícia makes the narrative and the children complement what she says. She speaks out each word as she writes.

Teacher I am writing here so that we remember our conversation. (reads the conversation she recorded and recalls the questions).

Teacher I am going to write these questions, who wants to illustrate?

(Patrícia invites the children to draw and explain what they are going to draw. She explains how the album is going to be built. One child is actively drawing ...others follow Patrícia's writing) (Magnólia May)

Through documentation, Patrícia invited the children to revisit the process of the inquiries and to develop and represent their ideas further. The children reflected on what they already had, an assessing process which formed the basis for future plans (assessment for learning). Patrícia modelled self-appraisal and self-management statements. The project's documentations and interactions followed the project structure explicitly discussed with the children (What do we want to know /do? How are going to find out/do it? What have we done? What have we found/ learnt?). Such dialogues promoted children's use of self-appraisal and self-management statements. Although having a clear conceptualisation of the project was something beyond the reach of most children, on many occasions the Magnólia children showed that they understood the concept of what a project was and how it worked (see CM chapter and transcript on questioning below).

During the documentation process the children's individual participation was integrated into the whole. The documentation products (Appendix 10 'Documentation in Magnólia') materialised a common product, a communal oeuvre that brought together the joint efforts of the group towards what became a common goal (Bruner, 1996). The individual contribution towards the group inquiry was reified in documents by Patrícia writing down each child's contribution attached to the child's name. This clearly gratified individual children, as their contributions were valued (*Dg. I said that!*). On the other hand though, this practice promoted, on some occasions, competition for

authoring between the children rather than joint collaboration or co-construction. Such assertions were commonly heard in the group interactions around documentation products (see next chapter).

The documentation records were also built with communicative purposes (for parents, for other children) and as a memory-keeping tool. Children, parents and other adults talked about the projects or other recorded activities well after they were finished, extending the children's thinking about them.

Questioning and assessment for learning

Questioning in the Magnólia classroom was a pedagogical tool which Patrícia used to conduct dialogues with the children, promoting thinking, self-regulation of learning and negotiation of meanings. Furthermore, questioning was a practice Patrícia wanted the children to include in their epistemic repertoire (Claxton, 2002). Asking questions about the world around them (Appendix 18 'Transcripts of A&P in Magnólia' 2 and 3), or about how they would carry goal-oriented activities (metalearning), was part of the desirable inquiry culture of the Magnólia classroom, as well as the MEM model.

J St (5:6)	Look, and if we got another one ... Would they have kids?
Teacher	that part I don't know!!
Fd (5:10)	That part we should do a Project about! (Magnólia May)

The analysis of open versus closed questions during teaching episodes (F= 277) showed a predominance of closed (67%) over open questions (33%), although the gap is significantly shorter than what is found in other studies of classroom talk. Patrícia understands the use of questioning in fostering children's thinking and she tries to implement a thinking culture within the classroom community.

It is important to notice, though, that there was a great variation in open questions frequencies between months (April 44% versus May 14%). Another significant finding, recurring in the analysis of Patrícia's interaction with the children, was that although many of the questions could be coded as open questions, it became evident in closer analysis that some questions were actually close. This was because Patrícia, sometimes, did not accept the child's answer and directed the child to something she had on her mind. In these cases the questions were coded as closed ones (Siraj-Blatchford and Manni, in press). As already seen in many transcripts, Patrícia's questions were

challenging to the children's thinking. On some occasions though, she got so involved with her inquiry process that she failed to value the children's questions, particularly the simpler ones that younger children pose. Patrícia's high expectations about children's thinking led her sometimes to work with the children beyond their ZPD, which might had impacted on some children's participation in such interactions.

In most teaching episodes Patrícia's feedback were task related (75%), using sometimes evaluative comments but mostly descriptive and constructive ones. Through such type of feedback, Patrícia extended the children's learning, promoted reflection and the use of strategies to develop an idea or to enrich an activity, constructing the way forward (Tunstall and Gipps, 1996) through assessment for learning (see Collaborative art panel transcript above).

Patrícia's feedback, though, was not always task-related and descriptive. Sometimes (25%) it was evaluative and centred on the children's personal traits such as laziness, their ability or willingness to think, to cooperate and to be 'a friend' (kind) to others. In such feedback there was often an underlying message that problems in children's work (in progress or product) were due to their behaviour or to personal attitudes towards others.

In the following transcript she interacted with Dg. (5.3) in a very authoritarian tone, and stressied Dg's failure to meet some general, not specific criteria: making a beautiful snail by behaving and drawing properly.

> Dg (5:3) has been working at the snails Project in the office. He comes and shows his work to Patrícia.
>
> **Teacher** That's not what we agreed! When you were next to Sb you did everything right. Now you went over there on your own ... doing what? (Rash and censoring tone. Dg looks at Patrícia with an expression of fear and also guilt.) Go and look for another paper and sit beside Sb (Patrícia sits at his level and looks into Dg eyes) Is this the best you can do? Answer Patrícia, who is speaking to you. Do you want me to show the other one you did? (Dg had started one and after making a mistake he threw it in the bin.)
>
> Dg went to get another piece of paper and came back to sit at the table. Sb (5:8) comes and shows his drawing to Patrícia.
>
> **Teacher** It's beautiful Sb! Beautiful!
>
> Dg quickly does an orange snail as he did in the beginning. Gets up to show it to Patrícia looking a bit unconfident.

Teacher No Dg! I don't want it this way! There is no point putting it here, as I don't want it. I want you behaving and drawing properly.

Dg goes back disappointed. He passes his finger over the top of the snail spiral exploring its shape. Then he leans over the table, his head over his arm, looking around the classroom with a vague look. After a while he gets up and puts his drawing in his shelf, a place where children's products are not scrutinised. (Magnólia May)

In this transcript, Patrícia failed to understand Dg's difficulties and, although she wanted to express to him that he was able to do a better drawing (in what terms?), she implied Dg was lazy and not willing to produce something 'right', up on to her standards. She then praised Sb (beautiful!) stressing Dg's inability in the face of a colleague. Her focus on evaluative comments on the product, her lack of descriptive clues that would help Dg extend his drawing further and her general and person-oriented feedback led Dg to feel lost and thus abandon the activity, adopting a helpless attitude. On other occasions during goal-oriented activities, other children displayed similar helpless attitudes, expressing fear of not being able to do what Patrícia wanted: *"she will not accept it!"* or expressing lack of confidence in their own abilities: *"I can't do it!"*.

Patrícia did not always respond in such a way to children's difficulties. In the above transcripts we've seen her encouraging children and providing appropriate scaffolding so that they could overcome problems. She also invited children to seek others' help in the face of difficulties. Patrícia changed her feedback approach according to her mood, to her satisfaction with the work children were producing, and in some cases according to the child she was interacting with (particular children seemed to challenge her more and Patrícia responded with greater authority, displaying her power). Such comments, despite their low frequency, had a great impact on the child's self-concept and on the group, who saw the child as someone who did not cooperate, or who was not competent.

As already mentioned, Patrícia was very proud of the children's projects and the intellectual and aesthetic quality of their products. This might have influenced her almost exclusive dedication to supporting and sustaining this type of work and her high expectations of children's performance. Such deep involvement did sometimes lead her to become disappointed when children did not respond according to her expectations and had trouble understanding their problems. The highly emotional/ affective tone in which she embedded even descriptive task-related feedback, making it person-oriented,

and the unpredictability of her feedback, seemed to confine the children to pleasing (or not) Patrícia, rewarding her and seeking her approval (performance-oriented). Moreover, children's sense of adequacy, their self-confidence, and their identity as learners was at risk, as children displayed sometimes helpless behaviours.

Children's playing and working together

In the Magnólia classroom children played and worked alongside each other most of the time. Even if they were doing individual activities they interacted frequently and enjoyed each other's company. Collaboration between peers is a process that is valued in MEM classrooms and it is frequently present in the classroom learning discourse.

> ("apple jam extract 2) Sb (5:7), Dg (5:2), J St (5:7) and Fc (5:5) are at the office to write the apple jam recipe to send to the kitchen.
>
> **Fc** I will do the apple...
>
> The children look at the recipe and discuss what each one will do.
>
> **Fc** Look, an apple is like this, isn't it?
>
> **J St** Yes.
>
> **Dg** (to J St) It's like this isn't it?
>
> J St looks and says it is. He assumes the role of the group tutor but they all get involved and try to coordinate each other's actions. Dg says that Sb can't do apples.
>
> **Fc** This is upside down. (he turns the paper around so that it will be in front of Sb)
>
> **Sb** I am going to write this (he points to an element of the recipe)
>
> **J St** That's not to write. It's to draw the materials. Who does the glass of water?
>
> **Fc** I am going to do it.
>
> **Sb** I am going to do this.
>
> **Dg** I am doing this. (they point to the recipe with the pen.)
>
> **Fc** J St that's not to write.
>
> **J St** this is "apple jam" (writing the title).
>
> (Magnólia April)

This transcript shows a group of children coordinating their actions to achieve a common purpose. Children use language to manage their contributions and to support each other in carrying out different actions. The children often engaged in metacognitive thinking and talked aloud either to themselves or, more frequently, to

their colleagues. They commented on what they were doing, explaining how they did it (self-appraisal) and voiced what they needed to do next (self-management). The space and material conditions favoured working alongside each other without conflicts. Patrícia's constant practice of documenting children's learning, writing down their explanations of emergent writings and drawings, would appear to favour children's display of narratives of their actions alongside the process. Similarly, the constant project discourse of 'What are we going to do', 'How will we do it' and 'What do we need to do next' was appropriated by the children, even the younger ones.

When children were working alongside each other, they engaged in many problem-solving strategies, and peers were often the source of help, support or learning.

> N(4:8) wants to draw a rainbow and the group does not know all the colours involved. B (5:8) tells her that they can go to the library and search in books about the weather. They go together, find a book and come back to the tables where N starts to use the book to check the colours of her rainbow. (Magnólia March)

Despite Patrícia not engaging frequently in direct support of the young children, unless they were involved in goal-oriented activities, they did also appropriate some of the classroom ways of learning and desired practices (such as writing, drawing, peer-tutoring). The classroom displays of children's work, the embedding of writing and drawing in meaningful activities, as well as the valorisation of aesthetical and inquisitive products in CM and CT seemed to act as a ZPD inviting the children to participate in such practices. The mixed-age group favoured young children's change in participation, as progressively they became more engaged with older children and the activities they were involved in.

Copying each other, peer-tutoring and views of competence

Copying each other was a strategy children used for learning but also a game the children engaged in spontaneously and with great pleasure. Copying as a means of appropriation was legitimised on many occasions (writing the name and date in your work; copying images of animals from books). Many of the field notes where children were playing or working with each other record a pair of children making similar drawings: one child takes the leading role and the other has to draw exactly the same features in the same position, in a game that posed many challenges for the children (identification of spatial relations, colour, shapes and lines). On some occasions it was

also a game where one child exercised power over another, not in an unfriendly way but experimenting with the boundaries of their authority over a colleague (for example: M (4:3) copying N (4:6) in January; J St (5:8) copying J (6:3) in May; M (4:7) copying Pt (4:8) in May).

Competent children were seen (both by the teacher and the children) as a resource to overcome problems (peer-tutoring). In some peer-tutoring episodes, the children displayed different understandings of the act of teaching and learning and their learning attitudes. Among the children there were different views of how to help others overcome problems (Appendix 18 'Transcripts of A&P in Magnólia' 3b): telling them what to do; encouraging them to try; doing it for them so that they will copy and doing it with them by holding their hand and directing it. We've seen some of these strategies being used by Patrícia with the children in the teaching episodes. The adults' way of doing things seems to have a great impact on children's attitudes towards teaching and learning.

In the Magnólia classroom there were particular children who tended to be associated with some type of competence (for example: B in reading and writing; T and J. with drawing). Similarly, some children displayed helpless attitudes very frequently (Pd, Fr, J St, and Gç) displaying lack of confidence in their own abilities to face some problems. These rather fixed competence views, did not change over the year. The role of the adult in mediating peer-tutoring processes and in building up children's sense of competence to overcome problems, seems still to be crucial.

Cooperation between children

Some of the above transcripts showed children engaging in cooperative interactions while they worked alongside each other. In the Magnólia classroom, children's lack of cooperation (conflicts or disputes) was also present throughout the year. The analysis of the balance between cooperative sequences and conflicting or disputing ones, showed that they alternated throughout the year. Until January, cooperation surpassed conflicts or disputes and in February and March the situation was reversed. In April, children again displayed more cooperative behaviours than conflicts, but in May the situation changed again, thus not showing a progression in terms of cooperative behaviours.

The analysis of conflict/dispute sequences shows different types of behaviours: mocking each other; blackmailing and intimidating; spoiling each other's work; taking things

away from each other; withdrawing friendship; competing for identity. Disputes were sometimes embedded in children's talking and working together but failing to co-construct a joint product. Children differ in their approach to collaborating with others: some (J and Sv) tried to build a common understanding of the activity and cooperate in producing a joint product while others (B & Fd) mostly took a rather individualistic approach (Appendix 18 'Transcripts of A&P in Magnólia' 4). Such opposite approaches transformed their talk into disputational (Mercer, 2000), with assertions and counter-assertions, challenges and children's independent decisions, causing the children to lose the ability to produce joint explorations as they tried to keep their identities separate. "Talk with disputational features...occur when the participants work to keep their identities separate, and to protect their individuality" (Mercer, 2000:102). In many episodes where children found it difficult to collaborate, children would threaten each other with "writing in the diary" and calling the teacher, to stop non-cooperative behaviour.

The variability between children's cooperative work and disputes or conflicts throughout the year, might be explained by factors other than the children's age and some structural conditions that often give rise to conflicts. This seemed to be related to a fragile sense of community, lacking in mutual acceptance and trusting each other to overcome problems. The judgemental focus on children's behaviours, thinking abilities and production capacities might have impacted on children's willingness to perform against others (and for the teacher), engaging in some competitive behaviour.

7.3. Activities & Projects time summary

The MEM model considers that children need time to play, explore and discover materials and documents, to question and 'wonder', and thus become motivated to engage in processes that lead to understanding the world in which they live (Niza, 1996). The MEM model adopts a socio-cultural view of learning in which participation in the collaborative production of cultural oeuvres becomes central to the learning process (Bruner, 1996; Peças, 2005).

What were the critical features of A&P

A critical feature of A&P is that children engaged in meaningful activities giving them an opportunity to choose what to do. This choice, however, is not completely free: as this study's observations have shown, the choice is mediated by space organization and resources, by time constraints, and by the negotiation process occurring during Council Meetings, next to the 'Activities Chart', and through dialogical interactions during the development of the activities.

During A&P children engaged in a combination of play activities (exploration of materials, socio-dramatic play and table games) and production activities oriented towards a goal (art activities, experiments, writing, and projects). Although children in both classrooms understood this as a time for doing things, working or doing projects, as well as a time to play, some differences could be observed: the Amoreira children saw this period as one for doing things and working, while the Magnólia children saw it as a play time, and a time for doing things and projects. The oldest children in both classrooms did associate these production processes with learning.

The teacher's perceptions of A&P indicated they both saw this as a time for children's autonomous work in various areas of the classroom. They both valued action as well as reflection, and privileged cooperation and peer-tutoring as the means to learn. Both teachers saw children's interests and experiences as the starting point for quality learning through engagement in meaningful activities. They saw their own role in promoting children's learning as an active and instructive one. Both Carolina and Patrícia stressed the importance of dialogic teaching to help children to move from explorative play and activities to purposeful and goal-directed activities where actions and thinking are linked together, stressed and extended. Both teachers recognised that

younger children need more time to play than older ones. Both communities understood that play and working were two separate activities. Play was associated with leisure and somehow with immaturity, while working, doing things or projects was associated with more socially valued activities, which demanded responsibility and effort, as well as giving the pleasure of achieving something.

Both teachers promoted in their classrooms practices (by incorporating goals, actions, ways of thinking and material tools) bridging the children's individual experiences, interests and ways of acting in the world, with "goal-oriented social process" (Wells, 1999:238) producing cultural 'oeuvres' (Bruner, 1996). As seen in some of the transcripts of the teaching episodes, the teachers incorporated learning of concepts (such as classification, numbers, and phonological awareness), information, skills (mastery of drawing materials and effects), attitudes (such as curiosity, questioning, reflection, collaboration), into meaningful activities. The curriculum was centred on meaningful practices negotiated along a continuum: at one extreme recognizing a child's informal knowledge and ways of acting in the world (play with materials, children's home experiences) and at the opposite extreme "encouraging the child's inquiry, and to show that society has a body of accumulated knowledge that is worth learning" (Siraj-Blatchford, 1999:41), extending children's access and active participation in co-constructing culture (Bruner, 1996; Niza, 1996; Peças, 2005).

Promoting learning through reflection

In many of the teaching episode dialogues, teachers induced the project epistemology and then promoted a systematic use of records to document some of the learning experiences. These records/documentation, made either by the teacher with the children, or by the children independently, promoted the children's consciousness of their experiences, and their reflection on the link between goals, processes and products through self-appraisal and self-management statements, a crucial process for learning to learn (Pramling, 1996; Watkins et al., 2002). Records were compiled using drawing, writing, mathematical symbols (ordinal numbers, and other conventional symbols such as arrows or colours) and graphic tools (tables) thus introducing children to semiotic tools from different literacies (van Oers, 1999a).

Recording what the children had done helped in some cases to transform an exploratory or play activity into a learning activity (for example: C playing with magnets in the

'Lab' at Amoreira; children playing with language at Magnólia). Through documentation and the records, children's learning became visible and the object of joint reflection. The display of these records on the classroom walls or on a washing line also acted as a motivating factor for more involvement in this type of work. Displaying children's work is celebratory "and celebration invokes future work" (Resnick, 1995:59).

How did A&P time promote learning to learn?

The above processes provided children with opportunities to progressively move their leading activity from playing with others to learning with others. However, some features of the way in which both classrooms carried on these activities offered different possibilities for children's learning to learn.

Patrícia valued project work and engaging cooperatively in different literacies in an integrated way as a means for children learning to learn. Carolina, on the other hand, emphasised the organization of rich areas and materials for children to explore and to help them to engage in different experiences and production processes related to different literacies; in addition she promoted purposeful planning where children's immediate choices were challenged to move into learning through practising and diversifying choices.

Regulation of learning

Children's participation in planning and evaluation, the use of the 'Activities Chart', the documentation of learning, and the teacher's involvement in the different areas, as well as the teacher-children interactive dialogues (including the use of questions and feedback) steered the type of legitimate learning in these communities and children's change in participation.

Despite the 'Activities Chart' promoting planning strategies and self-evaluation abilities in both classrooms, this study revealed important differences: at Amoreira, planning and evaluation were linked and informed each other, while at Magnólia these two processes remained mostly separate. The design of the Magnólia planning AC afforded children the opportunity to plan and think about the sequence of activities ('order of action' criteria), although it also hindered the possibilities of planning based on evaluation. What seemed (to the institution team) to be an efficient adaptation of the 'Activities Chart', acted against the processes that this MEM tool is meant to mediate – planning

informed by evaluation. The tool design though, did not account solely for the processes it generated: the way in which the AC was used and the meanings that children and the teacher attributed to it, was a crucial mediating factor in the way this piloting tool accomplished its function. Differences in teachers' perceptions of the importance of the AC as well as their practices, resulted in a stronger regulation of children's activities in Amoreira, and a weaker one in Magnólia. Patrícia believed that children should do what they were interested in, and that planning at the AC' should not prevent them from engaging in these activities: Responsibility to stick to individual choices or to venture into areas where they were less experienced was not a priority for the Magnólia children and their teacher.

Although some of the oldest children in both classrooms felt that the AC would help them to see what they had done, and plan things they had not as yet engaged in, this process was only observed at the Amoreira classroom. The Amoreira children actually used this regulative discourse (the youngest) and planned according with an evaluation of the AC (the oldest). The appropriation of the use of this tool as a tool for learning-oriented planning resulted from the frequency of planning criteria encouragement by Carolina individually and in-group evaluations, and the support of the semiotic tool 'the Activities Chart rules script'. Children's engagement in reflecting and regulating each other's learning experiences was seen to promote assessment for learning (James et al., 2006). The criteria used for planning and evaluation was also important in constructing the regulative discourse and promoting children's learning goals. The analysis of the criteria used in interactions along with use of the AC showed that at Amoreira some of the rules/criteria were found at times to limit the children's deep involvement in the activities.

The analysis of the field notes showed that there were particular areas in the classroom where participation in meaningful activities associated with different literacies was not fully promoted. This factor seemed to be related with the teacher's amount and type of engagement in some areas of the classroom.

In both classrooms the 'Home corner' was left without teacher's intervention, as an area without a learning project. At Magnólia other play areas ('Games with Water', 'Games and Constructions' and 'Garage') were left without Patrícia's involvement. For example, despite the 'Games with water' being placed inside the 'Lab' area, the children playing with water were never encouraged to think about what they were doing

or to develop goal-oriented experiments with the materials and the water. At Amoreira, 'Modelling', the 'Blackboard' and 'Maths' had very few interventions from the teacher. As a result the activities children engaged in within these areas were sometimes repetitive, and lacked a social/functional purpose. This contrasted greatly with the activities in the 'Office', (or the 'Science Lab') where writing and the exploration of letters were frequently embedded into meaningful activities. We had also observed that Carolina's emphasis on 'practise', on occasions reduced some activities (for example, Mr in Cut & Paste) to the repetition of actions detached from a broader cultural meaning and motive.

The teachers' questioning and feedback

Both teachers used questioning in sustained shared thinking interactions, encouraging the children's thinking associated with actions and practices. They invited the children to think about the purposes and intentions of their activities, promoted goal-oriented meaningful activities and invited children to engage in self-regulation of the learning processes by focusing on processes and strategies as well as rationales. Patrícia's questions, although open, were sometimes too complex and she did not accept all the children's answers. This led children to feel unable to meet her expectations and instead of thinking freely they tried to guess what was in the teacher's mind.

The use of descriptive task related feedback prevailed in both teachers' interactions with the children; such type of feedback is associated with children's learning to learn. However, the two teachers differed in aspects of their feedback. Carolina used feedback either as encouragement or criticism in relation to the task. Her feedback was emotionally neutral, withholding expressions of 'happiness' or 'disappointment' towards the child. When she used critical appraisal, she shared with the child clear criteria and strategies to improve the quality of their work, building up their resilience. Such feedback is what Tunstall and Gipps (1996) define as 'constructing the way forward', promoting self-monitoring and self-regulation attitudes which are an important feature of learning to learn (James et al., 2006).

Patrícia's use of feedback oscillated between task related feedback to a personally related one. On some occasions she used strong criticism focusing on the child's inability to produce 'good quality' work, linking this with personal attitudes or behaviours (laziness, misbehaving). Failing to understand children's difficulties, she did

not, at times, provide the appropriate scaffolding to help them to overcome their problems. Due to her high expectations for the quality of children's work, she sometimes showed disappointment and the children felt they were not able to perform up to her expectations. Her highly emotional tone, either showing satisfaction or disappointment with the children's work, strengthened her power in the classroom, leading the children to try to please her (performance oriented) rather than focusing on their work (learning oriented). During A&P time some of the children involved in goal-oriented activities or projects displayed helpless attitudes and lack of confidence. They also expressed fear (to the point of crying) and concern about carrying out what was planned and showing their work to Patrícia.

Although task-related feedback prevailed in Patrícia's interactions with children, the unpredictability of her use of strong person-oriented feedback created a climate where children did not know what to expect from their teacher. Contrasting with a weak regulation on children's activities, and children's reduced involvement in evaluation, Patrícia's feedback became a very powerful regulating feature in the classroom.

Change in participation

For a pre-school classroom to be a community of learning, there must be a change in children's identities from child into learner. Becoming a learner included (in these MEM communities) adopting different identities such as a worker (Amoreira), an inquirer (Magnólia), and an author (both). "I think that students, as ourselves have to feel themselves as authors… someone that produces and acts." (Peças, 2005:150) As the study progressed some children (particularly at Magnólia) indeed adopted the project conduct to self-direct their production/inquiry process.

The types of activities that children engaged in also showed that there were opportunities for children to move from play activities into goal-oriented activities. For instance the use of the Activities Chart in the Amoreira classroom provided opportunities for children to move from an impulsive or immediate choice of activities into purposeful planning. Progressively, they started to engage in planning informed by evaluation (formative assessment).

In the Magnólia classroom the quality of goal-oriented activities and projects, children's participation in documentation and the quality of the final products displayed in the classroom, remained a strong motivational feature for children's involvement

particularly in art and writing activities. Despite Patrícia's lack of direct action in addressing each of the children, some still increased their participation in goal-oriented activities throughout the year. However, Patrícia exclusive engagement in supporting the children's production of cultural 'oeuvres' together with her weak regulative system for negotiating children's choices, left some of the children mainly restricted to the play area activities, and only those naturally interested participated in *"important things such as projects (J St)"*.

Patrícia provided rich and challenging opportunities for the children to learn, creating a Cultural ZPD for them. At times, however that zone was not as proximal as it should have been to sustain the children's intellectual and socio-affective involvement in the activities, leading them to interrupt, to show frustration and lack of confidence; some of the children's poor resilience persisted throughout the year.

In the Amoreira classroom children were progressively more cooperative, able and willing to engage in joint projects (Dg and J example) and to contribute actively (Mr). Children's cooperation in the Magnolia classroom did not increase during the year and this was probably due to poor investment in community building, creating a supportive and inclusive atmosphere where all felt responsible for supporting each other. The focus on children's performance by highlighting their personal traits or abilities as well as the teacher's exertion of power, created a more competitive relationship between the children as they tried to perform for the teacher and engaged frequently in disputes and competing attitudes.

Chapter 8 Children and adults inter-acting in Communication Time

The analysis of the Communication Time (CT) in both classrooms used videos (10 in Magnólia and 13 in Amoreira), filmed throughout the year, as well as field notes. Two videos from each classroom, one at the beginning and one at the end of the year, were fully transcribed and analysed in depth. Such analysis was then cross-validated with summaries of the other videos. The participants' views of the CT draw from two interviews with the teachers (#1, #4), and part of the children's interview "routines, piloting tools and group situations" prompted by a photograph of CT.

8.1. Communication Time at Amoreira classroom

Picture 8.1. Communication Time at Amoreira

8.1.1. What did children and teachers do during Amoreira CT?

When the group got together, individuals or small groups of children presented to each other what they had been doing in the morning. Each of the presentations was coded as a presenting episode (PRE) and a total of 238 episodes were analysed throughout the fieldwork. In the Amoreira class, CT was a consistent part of the daily routine (occurring on 28 out of 33 days). On some occasions children would also discuss a rule, or a problem of interest (DIS – 2), or decide collaboratively about something (DEC - 1). Each day children decided if they wanted to present something or not, and sometimes it was Carolina who invited some children. Table 8.1. presents a summary of the CT episodes from nine video-recorded observations.

Table 8.1. Analysis of CT Episodes in Amoreira

	CT 1 10.10.03 *	CT 2 29.10.03	CT 3 12.11.03	CT 4 27.11.03	CT 5 11.02.04	CT 6 16.03.04	CT 7 01.04.04	*CT 8 30.04.04* *	CT 9 20.05.04
Number of episodes	10	11	5	12	18	15	11	5	6
Number of PRE episodes	10	11	5	12	18	15	11	5	6
Number of children Presenting	8	10	6	9	14	13	8	8	7
Group/ individual PRE	1/9	0/11	3/2	0/12	3/15	0/15	1/10	3/2	1/6
Time	17:30	20:20	13:27	27:00	27:21	32:00	26:22	23:40	20:00

* Fully transcribed videos

A mean number of 9.2 children presented each day and a mean number of 10 PRE episodes were recorded throughout the year. Some children presented more than one piece of work in the same day. Although sometimes children presented collaborative work in pairs or small groups, it was individual presentations which most often took place. This activity ran for periods ranging from 13 to 35 minutes, with a mean duration of 22 minutes.

A descriptive, quantified summary of the episodes classified by type and focus in each class throughout fieldwork is presented at Appendix 19 'CT Episodes types and focus'.

This analysis showed a predominance of 'Writing' activities (28%), including writing letters, recipes, texts, emergent writing, and records, clearly reflecting the importance that the MEM approach gives to early literacy. The presence of 'Drawing' was also significant (24%) and was linked in some ways to writing activities, as children were often invited to use drawing to communicate. Other creative activities were also presented – 'Play dough (16); 'Painting' (3); 'Cut and paste' (12); 'Junk modelling' / 'Arts and crafts' (16); 'Constructions' (19). Other presentations were about 'Games' and puzzles (14), Maths (9), 'Computer' (5), 'Projects' (5) and 'Experiments' (5). 'Pretend play' had only 5 presentations despite being the most popular area (49 mean number /month) recorded in the Activities Chart.

The type of experiences that were presented in CT demonstrates a prevalence of processes that involved the development of a tangible product (For example: drawing,

construction; puzzle; written message) against exploration processes or play, which do not have a final product. This fact shows a clear valorisation of the production of oeuvres that could be appreciated and evaluated by the whole group.

Most of the activities presented were somehow limited in scope and time, responding only to the child's (occasionally a group of children's) immediate goals, and were often confined to one area of the curriculum. Few presentations were related with projects or more complex, chained activities that were carried out through a sustained period of time.

8.1.2. How did participants in CT perceive this activity and their main goals?

Teachers' perceptions of CT

From Carolinas' perspective this activity was seen as having two main purposes: first, it promoted community building, through sharing individual learning and accomplishments within the group, providing a celebration of achievements by the whole community; second, CT was seen as an opportunity to enhance the learning of both the presenters and the audience of children, through reflection and co-construction mediated by language:

> Then, at the end of the morning it's a fundamental time where they tell their colleagues what they've done, how they've done it and the others will want to try it also the next morning. And that's how they pass their individual experiences on to the group. (Carolina #1)

The idea that CT contributes to *'community building'* entails children learning with each other, building up common knowledge and shared meanings and being responsible for each other's learning (Rogoff, Matusov and White, 1996).

> And there is always a child having done something today who is going to help tomorrow. We try to motivate them to share, cooperate and help. What is interesting is to learn things with others so it is in these 15 minutes at the end of the morning that we convey this way of being. (Carolina #1)

This shared responsibility for learning underlies a view of children as knowledgeable and competent to teach others (peer-tutoring).

The second goal of CT, according to Carolina's perceptions, was to promote a process of learning through language use and communication. Within this goal, Carolina

pointed out two different aspects: using language to share and reflect on the processes of learning and using group interactions as an evaluation activity. Holding the view that children (and adults) learn through interactions with others, Carolina saw this activity as a learning activity complementary to the active hands-on experiences. Through language, individual learning experiences were 'passed on' to the group and different children contributed to the learning of all. Furthermore, she believed that children learned through a process of reflecting on their own actions and experiences when they were asked to speak about them to the group. This view was linked with Bruner's idea that "the best way to learn is to teach". Carolina recognised the role of language in metacognitive thinking and metalearning.

> I think that they learn by starting .... Becoming conscious of the processes and reaching the product and going back, explaining the process. If they build up this path they learn better. When they tell others a simple thing, for instance a drawing, if they explain they become conscious of what they have done, of difficulties and successes... When he managed to explain that, he controlled the technique. He was able to plan, to evaluate what he had done, he managed to make the others aware of the ways... of each step to reach the end.... So in these little things they appropriate the methods, the strategies and they do learn. (Carolina#4)

Carolina saw CT as an important assessment activity: *"it is also the day's evaluation for them"*. This self-assessment process was also done in the group where children were invited to evaluate others' experiences. The assessment process involved, in her view, reflection about difficulties and strategies, criticism as well as valuing the positive features of the experiences that had been reported and the products presented.

> If it could be better... how. Suggestions... you could have done it in a different way, to improve, we criticise to improve. They (children) are also appropriating others' strategies and processes and trying... "In your situation I would have done this!" They are helping each other once more. That is the importance of evaluation. (Carolina #4)

According to Carolina, the group assessed according to several criteria: enjoyment, performance, group coordination, collaboration, links between the goals, processes and results, the strategies used and individual effort and involvement. It also included a common reflection on how it could be improved. Assessment in Carolina's view was viewed as assessment for learning (Gipps, 2002; Black et al., 2003).

Peer-assessment was, according to Carolina, an opportunity for children to look at others' points of view (peers' and teachers'), to decentre (Donaldson, 1978) and try to think about others' intentions, feelings, motives and difficulties. Such a view of CT as a shared assessment process is highlighted by the MEM pedagogical model: "the validation of learning gains more meaning throughout its communication to peers for assessment and confirmation" (Niza, 1996:145).

Children's perceptions of CT

In the Amoreira class, all but one pair of children could clearly identify CT as part of their daily routine, and all children recognised the photograph and talked about showing others their work. Children had a view of CT as an activity where they showed and told others what they had done or found out, as well as where they saw and listened to each other, reporting their individual or small group experiences.

> **C (4:3)** They are showing... It's like that: "children, quiet cause I want to show" and then, "this is a puppet that I've done in the 'factory' with Carolina's help.

Older children understood CT as an opportunity to explain to others how they did their work, and to copy good models, seeing the children in a teaching role. This was perceived as an interactive process between presenters and the group, either by asking questions or by evaluating each other's work.

> **Dg(5:8)** They want to speak and they raise their hands and then they ask. Some say it's ugly, that you have to practise more; some have practised a lot and know already how to do it very well.
>
> **R** So, and the children presenting, do they also learn something, or not?
>
> **Dg** Yes they learn ... they were the ones who did it! ... and they learn by themselves.
>
> **R** And also with what the others say, or not?
>
> **Dg** Yes ...(thinks)... some actually say some important things...

Dg clearly saw the purpose of CT as a group assessment of the learning experience and a way to improve through the contributions of others. He mentioned learning through listening to others' comments *"that you have to practise more"*, or with the "*important*

things" the others say. In children's views all the children participated in CT in an equal relationship with mutuality of interaction (Kalkowski, 1995).

Children enjoyed presenting at CT and felt valued in the context of their class community. One Amoreira girl said that they became sad if they did not show their work.

Both the teacher and the children had a common understanding of the purpose of CT, including sharing their work and achievements with peers, learning with each other's examples and assessing and promoting improvement. The teacher understood this activity also as an opportunity to deepen learning by reflecting with the support of language (Appendix 11 'Summary of teachers' and children's views of activities' 7)

8.1.3. The roles and opportunities for participation

In CT the participants took on three main roles:

1) Facilitator - mainly the teacher, but with some intervention from children.

2) Presenter - children with teacher's support;

3) Audience – children and teacher.

The *Facilitator*'s role (mainly Carolina and sometimes the presenter) was mainly that of managing the activity by deciding who was going to present, organizing the space, time and materials, conducting the flow and structure of the activity, assigning the floor and managing subjects' participation in the activity and their interaction.

The *Presenter's* role entailed showing and presenting their work, explaining how they did it and providing rationales for their actions / decisions, self-evaluating their work, reflecting, listening to other children's and teacher's comments, taking on board what others said and co-constructing meanings, often supported by Carolina.

The *Audience* role included paying attention to others' presentation of work, commenting, interpreting, understanding, relating to their own experience/ knowledge, co-constructing, evaluating – praise or criticism - providing rationales for evaluation and complementing others' work or giving ideas. Audience children were also supported by Carolina, who modelled and encouraged them to engage with the presenter(s).

The analysis of children's participation in CT through the year (Appendix 20 'Patterns of participation at CT') showed that all the children had many opportunities to present. The children with inconsistent patterns of attendance had fewer opportunities (but no less than three). All the others had at least 10 presentations and six had 20 or more. All children had good opportunities to gain different learning experiences by participating in both roles. Most often it was the children who decided who was going to present.

8.1.4. Mediated inter-action in Amoreira CT

Using language towards goals

From the analysis of CT videos and field notes, a common structure of PRE episodes emerged. This structure reflected the goals of the activity expressed by the children and Carolina, and included different fundamental actions in a quasi-fixed order:

1) Showing / telling and describing, explaining;
2) Questioning and commenting;
3) Evaluating
4) Suggesting ideas for improvement.

Learning to be a competent participant in CT entailed understanding this basic structure, participating according to the sequence and understanding what was expected to happen in each part of the structure. The basic structure of PRE episodes was not a fixed one. Some episodes contained only some of the actions and missed others. Other episodes included other types of actions and interaction modes such as 'reconstruction of past experience'. The actions were not completely independent and self-contained; in the middle of 'showing/telling and describing' children could introduce 'comments or questions' and after that return to 'showing/telling and describing'.

Each part of this basic structure set up different participation roles and invited children and adults to think and use language to interact in specific ways.

Showing/telling and describing

"This is what I wrote on the typewriter (holds his notebook for others to see)" D A (4:2) – Amoreira 1 – ep.8.

The actions of 'showing/telling and describing children's learning experiences focused on the product of children's work presented (what it is, intentions and goals or

purposes), as well as on the processes involved in doing it (how, with whom, using which materials, rationales for decisions, difficulties and strategies).

Children tended to describe particular features of their product and only on some occasions did they state their goals or intentions. Carolina did not structure the presentation of children's work tightly and left the children to go on directly to describe what they had done. The presenter sometimes provided clarification of her/his intentions and goals and justified her/his decisions after being questioned, or responding to some comments by classmates, In order to transform children's activities into meaningful and purposeful ones, it is important that the children progressively link their activities with clear goals and that they make decisions about what to do, and what mediating tools to use, according to those goals (del Río and Álvarez, 2002). This seems to be fostered by the opportunity CT gives to children to talk and reflect back on their activities.

Carolina contributed to the valorisation of the children's work, supporting the presenter(s) in their presentations. In the Amoreira classroom every activity was valued and seen as an experience from which all children could learn, from a simple play dough figure to an individual drawing to a collaborative construction or a long-lasting project.

After presenting the product, its features and goals, children were encouraged by Carolina to explain to others the processes (both action and thinking) they underwent in order to achieve the final product. They revisited their learning experiences to talk about them from a more detached position, which entailed a reflective observation of them acting (doing and thinking). Here, the children transformed their play activities (or other activity types) into metalearning, making explicit to themselves and to others different aspects of the learning process (Watkins, 2001).

The analysis of children's talk about processes (Appendix 21 'Transcripts from CT Amoreira' 1) showed that it included different reflections on the learning process and displayed different information to the group: how (processes, time sequence of actions); resources (with whom, using which materials); rationales for decisions; difficulties and strategies (asking others to help, thinking carefully when doing things, paying attention). Talking about learning processes is an essential feature of formative assessment and learning to learn. The presenter children underwent a metacognitive process in recalling the process they engaged in and bringing it to consciousness. In the

early years though, children are just beginning to understand their actions as learning activities and this was evident on some occasions in CT, but not always. What might have been a more direct and spontaneous activity (such as playing a game) was now becoming a reflective action and therefore had the potential to be transformed into a learning activity (van Oers, 1999a).

Not all episodes contained talking about processes or strategies. Indeed in CT1, only half of the PRE episodes involved the presenters in explaining the work processes. This fact might have been due to two reasons: first, the number of presentations (10 or more) that took place in CT sessions. Secondly, as the analysis of the CT episodes throughout the year shows, children learned to explain the processes and became more active participants as they gained experience in communication.

Modelling by Carolina played an important part in supporting children to present and to reflect on their learning processes. Particularly at the beginning of the year, Carolina presented sometimes on behalf of the child. This happened if a child had some difficulties in talking. At the end of March though, all the presenters took responsibility for their own presentations, explaining what they had made and how with occasional support from Carolina.

Children used gestures (showing to others, demonstrating) to complement language in describing and explaining what they did and how they did it. Sometimes the use of language alone was not an easy process, requiring the child to become conscious of what was done and expressing it in a way others could understand. The use of language rather than gestures and demonstrations was promoted not only by the nature of the activity (which was about telling what they had done and not doing it) but also by Carolina, who invited children to transform their actions into speech ("you don't need to do it, just tell us how you did it"). Younger children tended to use more gestures and repetitions of actions to explain how they did things than older ones.

Although older children were more likely to describe their thinking processes as linked with the activities they were presenting, younger children could also engage in this reflective (semiotic) process when asked to provide a rationale for their decisions and to reflect on strategies and difficulties. Carolina made use of 'why' questions to prompt children's intentions and goals as well as rationales for decisions in the processes. Other

types of questions ("How?", "What have you done first? And then?"), helped the children focus on the processes and structure their thinking and presentation.

Another strategy that Carolina used to support children's presentations, their reflection and effective use of language, was rephrasing and extending the child's speech. The following dialogue between Carolina and two presenters illustrates this interactive co-construction of meanings.

> Mn (4:11) and Jr (6:2) have been working on the computer together printing a photograph of Mn's brother. They are explaining the steps towards finding the photograph in the computer.
>
> 1 **Mn** I pressed the folder ...
>
> 2 **Teacher** You pressed the folder named photographs, ...
>
> 3 **Mn** Yes.
>
> 4 **Teacher** Yes, and then?
>
> 5 **Mn** And then ...
>
> 6 **Teacher** ... all the photographs appeared,
>
> 7 **Jr** The photographs appeared ...
>
> 8 **Teacher** And which one did you choose?
>
> 9 **Jr** The Rodrigo (Mn's brother) one.
>
> 10 **Mn** the Rodrigo one ...
>
> 11 **Teacher** One that says Rodrigo in there, and you "clicked" on Rodrigo's photo.
>
> 12 **Mn** Yes! Only Rodrigo, not Mn.
>
> 13 **Teacher** Ah! Is there another one that says Mn and Rodrigo?
>
> 14 **Mn** Yes.
>
> 15 **Teacher** And one that says only Rodrigo.
>
> 16 **Mn** Yes.
>
> (CT Amoreira 13 – ep.2)

Carolina supported and extended the children's explanations (lines 2, 6, 11), prompted them by asking for more information (4, 8) and rephrased the children's rudimentary language (2, 11). However, the presenter did not take a passive role and contributed by clarifying Carolina's thinking (12). This is a characteristic of interactions where participants co-construct their meanings by mutual negotiation, engaging in each other's thinking and making sure there is mutual understanding (Mercer, 2000; Siraj-Blatchford

et al., 2002; Jordan, 2004). As we have seen, Siraj-Blatchford calls these types of cognitive pedagogic interactions "sustained shared thinking".

Questioning and commenting

> "I've never seen an airplane with exhaust pipes" Dg (5:7)

Once showing/telling and describing ended, the group was 'formally' invited to engage with the presenter(s) and their work in a process of questioning and commenting, thus contributing to the common understanding and extension of meaning. The presenters were confronted with others' perspectives on their own work and invited to see things from a different point of view, experiencing 'variation of thought' (Pramling, 1996). Being confronted with audience comments and questions, the presenters' learning experiences and products were challenged and extended. Here there was a clear shift from an individual ownership of processes and products to a group appropriation of the learning experiences.

Most often, the audience comments and questions to the presenter(s) provoked thinking and the display of a rationale, extending the group's co-construction of meanings and ideas.

(Jr (6:2) is showing his airplane and explaining its details)

1 **Dg (5:7)** it doesn't have a tail like the airplanes.

2 **Jr (6:2)** next time I will do a helicopter. (talks to himself planning future activities)

3 **Teacher** Dg is asking you why it doesn't have a tail.

..... (behaviour management)

4 **Dg (5:7)** Doesn't it have a tail like the real ones?

5 **Jr (6:2)** (raises his shoulders and looks at his airplane). Well...

6 **Teacher** What did he say it was? What kind of airplane?

7 **L (4:8)** An army one! (L searches for a position where he can watch properly)

8 **Teacher** An army one. And what are those things at the end? What are they?

9 **Jr (6:2)** They are the exhaust pipes. For them to go faster.

10 **Dg (5:7)** I've never seen an airplane with exhaust pipes.

11 **Teacher** Without a tail? Do you think that it should have a tail up here? (makes a gesture next to the plane rear.)

12 **Td (5:2)** No because if not it couldn't fly!

13 **Teacher** With a tail? Don't airplanes usually have tails?

14 **L (4:8)** Yes!

15 **Td (5:2)** Yes they have but they don't have those things, the army ones…

(the discussion goes on (another 53 turns) with the group relating to a visit they made to an airport. Another five children participate in this conversation)

(CT Amoreira 13 – ep. 3)

The whole group's interaction with the presenter brought different perspectives on the way airplanes should be constructed, which gave rise to questioning, thinking and providing rationales by the group. In the Amoreira class, the validation of the working /productive child was now turned into a validation of the thinking child, and a culture of learning where children were seen as critical participants and not as passive learners. Making comments, asking questions and discussing rationales were interactive modes particularly present in this part of the CT structure. Carolina in this episode supported the children in expressing their own views better and communicating efficiently with their classmates (lines 3, 6, 8). She also questioned the views that children put forward, leaving them open to more questions and explanations (lines 11, 13). However, she missed an opportunity to help the children reach a conclusion or plan another activity to find out more about airplane types and their components, (e.g. by starting a project).

The analysis showed that engaging in questioning, providing rationales, and challenging ideas were not always present but progressed throughout the year, as children gained more experience in CT. At the end of the year also there was an increase in children's metacognitive statements and in the use of a mentalistic language in the CT sessions.

Carolina's pedagogy seems to have played a crucial role in mediating and promoting such a change in participation. Carolina was open to accept what different children said and, sometimes, she transformed an individual comment into a question (see previous extract lines 1 and 3), modelling this interactive mode. In this context children seem to feel free to ask more questions throughout the presentation. Children asked different kinds of questions: information-gathering questions (what *is a photocopy machine*?), clarification questions (*what is this*?), as well as more challenging questions, which

asked for rationales: Dg (5:1) *why is that the monkey who climbs things, and why is he not climbing there?* (CT Amoreira1- ep. 12)

When Carolina elicited the audience comments and questions she welcomed every contribution from the children restraining her evaluation of the 'validity' of the children's comments and questions. Particularly when children were involved in commenting on an open issue (without a right or wrong answer), they showed more willingness and greater ability to ask questions.

Evaluation and ideas for improvement

> **Teacher** So, Mn how did you do the feet over there? Did you get distracted? Weren't you thinking well?
>
> **Mn (4:5)** "I didn't look at the doll".

In the evaluation of presented work, children were invited not only to provide general feedback but also to be specific about the feedback and to provide ideas for improvement. The evaluation phase extended the reflection by the presenter(s) and the audience on the work presented (product and processes) using particular criteria, which over time became part of the pedagogic discourse of the class. Carolina used the assessment of the presenters' work with the specific intention of reflection with criteria – 'mutual construction', and appropriation of tools for improvement – mutual construction for improvement (Gipps and Hargreaves, 2000). Children learnt to use criteria for self-reflection on the processes and products of learning. The following transcript illustrates this:

> Jr (5:8) showed the group his pencil-holder and explained how he made it. After his presentation Carolina invites the children to comment on Jr's work and to evaluate it.
>
> 1 **Teacher** He did that work and this "photo" (holds the drawing of the pencil holder). What do you think about the "Photo"?
>
> 2 **Fr 5:0** It's nice!
>
> 3 **L (4:2)** It's nice!
>
> 4 **Teacher** Is it really, really nice?
>
> 5 **L (4:2)** Yes!
>
> 6 **Teacher** Can we see that this is made from leaves, and that the pencil-holder is red ... is it possible to see (from the drawing) that it's that work ... that the pencil holder is red, do you think?

7 **Mn (4:5)** Little Jr did ... Jr did it a bit ugly ... (she makes a gesture of scribbles).

8 **Teacher** Mn thinks that it is a bit ugly, why Mn?

9 **Mn (4:5)** Because he did some things here ... (points to Jr's "photo")

10 **Teacher** What?

11 **Mn (4:5)** He did ... it looks like these are leaves but they aren't.

12 **Teacher** Jr look! Mn thinks that you could draw better leaves than these ones. She thinks! ...could you? Could you do the leaves better, here? The drawing of the leaves? Could you?

13 **Jr (5:8)** (says no with his head).

14 **Teacher** Couldn't you?!

15 **Mn (4:5)** It's like small balls (she makes the gesture of the drawing)

16 **Teacher** Perhaps Mn...

17 **Dg (5:1)** She (Mn) couldn't either. She couldn't do it either!

18 **Teacher** Do you think Jr couldn't draw some leaves? He already did some drawings of leaves in your book ...(Dg has been involved in doing a book of different leaves) he has done so many drawings of leaves ... (turns to Jr) You could do it, couldn't you? Where you a bit distracted? Do you want to work on it tomorrow so that you show us how you've improved it?

19 **Jr (5:8)** (nods)

20 **Teacher** Do you want to? Do you want me to put it there in the 'unfinished work tray'? I am going to put it there. (Carolina stands up, puts Jr's work in the tray and returns to the table)... Then, we have .... (looks at Jr) if you think that it is finished Jr, that's ok. You can go and get it. Or do you want to finish it tomorrow?

21 **Jr (5:8)** I want to finish it tomorrow! (firmly)

(CT Amoreira1 – ep. 1)

The group was assessing Jr's "photo" of his pencil holder. The children started with a general evaluation (lines 2, 3), which was questioned by Carolina (line 4), eliciting descriptive judgements beyond the evaluative ones. Seeing that they were not able to move into this kind of feedback, Carolina introduced criteria for the assessment of the photo (line 6) focusing on the representation of reality. Mn offers a criticism of Jr's photo using Carolina's criteria. Carolina rephrases Mn's speech and elicits Jr's self-assessment. She stresses that Mn's criticism expresses only her thinking and does not reveal her own (Carolina's) position, giving space for other opinions to arise and for Jr's self-assessment which could disagree with Mn's, leaving it open to discussion. That

was in fact what happened. Jr thought that he could not have done it better and Dg, backing up his friend, said that Mn herself couldn't either (17) as if he was questioning the justice of her critical comment. Carolina here intervened refocusing the reflection on Jr's ability to draw and reminding Dg that he had done it before (18), so reinforcing Jr's confidence in his abilities; she advanced distraction as the possible reason for his poor result and asked him if he could improve it later. She offered Jr (and the audience) a tool for reflection and self-assessment and communicated to the children that learning was not so much about getting things right but more about reflecting and being involved in improving. She promoted Jr's (and the group's) resilience with her support and positive expectations, encouraging Jr to persist despite frustration.

Although children can more easily get involved in assessing others' work (offering criticism), there were some times in the Amoreira class where children engaged in self-assessment.

1 **Teacher** So, Mn how did you do the feet over there? Did you get distracted? Weren't you thinking well?

2 **Mn (4:5)** No… I didn't look at the doll.

3 **L (4:2)** I did it also…

4 **Teacher** Do you want to improve it and do a skirt over the feet?

5 **Mn (4:5)** (nods)

6 **Teacher** You can do it, do you want to?

7 **Dg (5:1)** Like I did, I did a skirt also.

8 **Teacher** Look! Do you see, Dg also did a skirt and L too. The skirt will cover the feet, will it not? Ok! Do you want to do it then? Will it stay to be finished tomorrow?

9 **Mn (4:5)** (nods firmly!)

(CT Amoreira1 – ep. 5)

Mn (4:5)'s self-assessment (line 2) was prompted by L's comments as well as Carolina's reflective comments about Mn's thinking state during the process of drawing the doll (1). Mn did not just accept or repeat what Carolina said but she expressed her own view of what went wrong "*I didn't look at the doll*" (metacognitive statement). She was also supported by both Carolina and other children, who did not make any judgements on Mn as a person and took mistakes and failure as a normal part of the learning process. As we've seen in the CM section, Mn was learning that making

mistakes did not mean 'being bad' as some young children frequently tend to think (Claxton, 1999; Dweck, 2000). Particularly interesting was the support by L and Dg, showing solidarity with Mn and encouraging her to improve her work by using the same strategy they had used. Dg and L had made the same mistake in the morning during A&P time and were supported by Carolina in overcoming their difficulties. Also important was the concept of 'work in progress', the ability to return to something that was not final and unredeemable. There was always the possibility of working on it later, restoring control of the work using problem-solving strategies, generated either by the assessment by their peers and Carolina (line 4 above and lines 18 – 23 in extract 2). This was an example of assessment for learning, making use of joint reflection but giving control to the child (Gipps, 2002).

Children learnt to use criteria for assessment moving from a general appreciation (see lines 2 and 3 in Jr pencil holder extract) of the products presented to a more focused and detailed assessment of the processes and products (line 7, 9, 11, 15 same extract) involved in the learning experience.

A summary of the analysis of evaluation criteria used in two CT video recording transcripts is presented in Appendix 21 'Transcripts of CT In Amoreira' 2. Most of the criteria used in evaluation of children's work during CT were concerned with processes. When product-oriented criteria were used, they were usually complemented by descriptive assessment focused on the processes that might have contributed to the quality of the product. As we have seen, this combination of product and processes criteria, with particular emphasis on the processes, is a characteristic of effective formative assessment, providing that it is descriptive rather than evaluative (Gipps and Hargreaves, 2000). Using this type of feedback, Carolina gave children tools to reflect and criticise (see line 6 on Jr pencil holder extract) and which they could use in their own learning experiences, thus enriching their learning tool-kit (Black and Wiliam, 1998). The concern that the production-oriented learning culture in the Amoreira class could encourage the children's performance-orientated, rather than learning-oriented approach to learning, did not seem to stand. The product was used as the starting point for the interaction, while most of the dialogue was concerned with the processes. An evaluation process, being more focused on the descriptive features of processes than on evaluative comments on the product, promotes learning orientation in children.

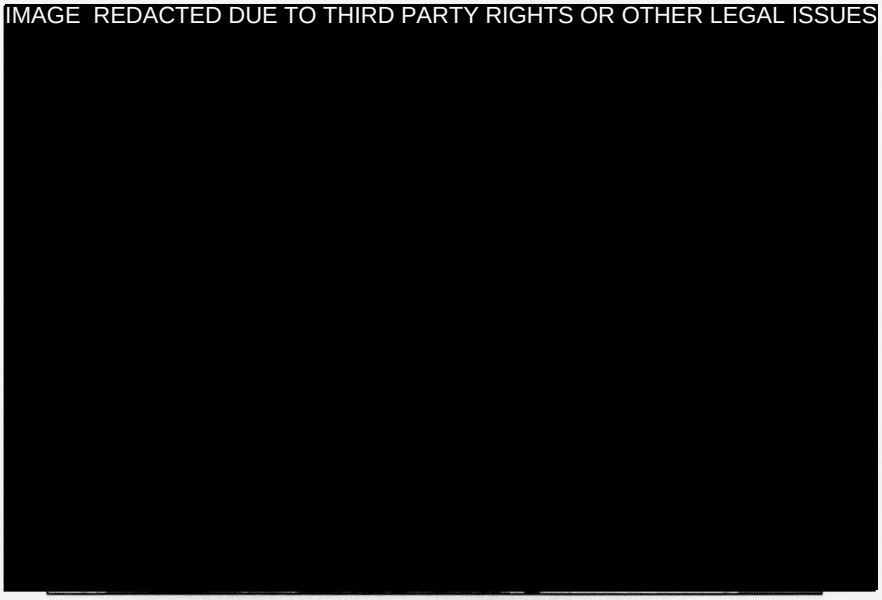
The diversity of the criteria for assessment in the Amoreira class (Appendix 21 'Transcripts of CT In Amoreira' 2) shows how allowing children time to evaluate could effectively promote not only metacognition but also metalearning, focusing on different aspects of the learning process: thinking (criteria 2, 10, 13), skill and knowledge (1, 4, 11, 12, 16), contextual conditions (15), relationships (5, 8, 14), feelings (6), strategies (3) and dispositions (7, 9, 17) (Watkins, 2001).

In this appropriation process, the role of the teacher was crucial in modelling assessment. The interaction extracts analysed showed that it was particularly important that the children felt free to criticise, to express their points of view and be sure that everybody was supported and encouraged so that they felt confident to self-evaluate without feeling rejected as a person or a friend (Pollard and Filer, 1999).

In some of the Amoreira CT episodes, the evaluation of children's work was also complemented with *ideas for improvement.* Suggestions given by peers and by Carolina to the presenters included: "*Go back and work more with some directions from Carolina and the group*" (Amoreira 1 ep. 2, 5); "*ask friends to help*" (Amoreira 1 – ep. 4); "*look carefully*", *"pay attention"* (Amoreira 1 – ep. 5); *"listen to friends' criticism and suggestions"* (Amoreira 13 – ep. 4). These statements are very important in offering learning strategies to overcome obstacles and building up children's resilience.

On the other hand, Amoreira CT episodes rarely included follow-up on children's work and group reflection on new planning, which could extend the children's learning, as already mentioned in the airplane discussion extract (CT Amoreira 13 – ep. 3). In this way the group missed the opportunity to engage in more complex activities such as projects.

8.2. Communication Time at Magnólia classroom



Picture 8.2. Communication Time at Magnólia

8.2.1. What did children and teachers do during Magnólia CT?

CT in Magnólia classroom was used for different purposes and on some occasions (8 out of 36 fieldwork days) it did not take place. Although the flexibility in terms of routine was justified by different institutional and even group decisions, the children looked somewhat confused about what would happen during this period of the morning, were sometimes surprised by Patrícia's decisions (filed notes 09.03.04; 23.04.04 and 12.05.04) and became more dependent on her decisions.

In Appendix 19 'CT Episode types and focus', a quantitative descriptive summary of the observed types of episodes and their focuses illustrates the different activities that took part during this daily routine. Apart from the most common activity of children presenting some work or learning experience (PRE - 42 episodes), sometimes children would sit with Patrícia to discuss a rule, to talk about a problem or a topic of interest (DIS – 2 episodes), to decide collaboratively about something (DEC – 2 episodes), to plan some parts of a common project (PLAN - 6 episodes), to complement one activity (COMP -3 episodes) or to pursue a whole-group activity such as listening to a story or rehearsing a play (ACT – 8 episodes). The analysis will pay particular attention to the PRE episodes not only because it is the most common activity in the CT routine, but also because presenting work to the group is the MEM model's purpose for CT. The children in the Magnólia class were involved in presenting their work to the group (PRE

episodes) only on half of the fieldwork days (17 out of 35). However, communications of group projects also took place at other times of the day when it involved either presenting to parents or to other classrooms. Table 8.2. summarises some characteristics of CT, through the analysis of 8 videos and 1 audio recorded CT throughout the year.

Table 8.2. Analysis of CT Episodes in Magnólia

	CT 1 audio 19.09.03	CT 2 22.10.03 *	CT 3 17.11.03	CT 4 2.02.04	CT 5 08.03.04	CT 6 24.03.04	CT 7 19.04.04	CT 8 20.04.04	CT 9 12.05.04 *
Number of episodes	5	2	1	2	3	3	6	2	1
PRE episodes	4	1	1	2	3	2	5	2	1
Number of children Presenting	9	1	5	6	5	5	5	8	3
Group/individual PRE	3/1	0/1	1/0	2/0	1/2	2/0	1/4	2/0	1/0
Time duration	27:00	25:00	21:34	18:17	15:00	30:12	21:40	18:14	25:00

* Fully transcribed videos

In the Magnólia classroom, CT activities ran for periods ranging from 15 to 30 minutes, with a mean duration of 22 minutes, and included a mean number of 2.3 PRE episodes presented by a mean of five children. The small number of children's presentations in Magnólia was related to the selective nature of the work presented to the group. This selection favoured group activities over individual ones.

As at the Amoreira classroom, the activities most often presented in CT were writing activities (texts, letters, among others) (25 %) and art activities (20%). Most of the CT episodes recorded in the Magnólia class (48%) were directly linked with projects. Other activities such as experiments and maths problem-solving (7%) were also presented. Games, constructions or other play activities were never presented. At Magnólia, CT focused on the presentation of a tangible product rather than presenting the processes of exploration or play, which as previously mentioned were a significant part of the children's activities during A&P, but where Patrícia did not get involved.

8.2.2. How did participants in CT perceive this activity and its main goals?

Teacher's perceptions of CT

Patrícia saw this activity as having two main purposes: first, to promote a community of learning by sharing/communicating children's learning and accomplishments with the group by celebrating achievements; second, she saw CT as an opportunity to enhance the learning processes for both the presenters and the audience when engaging in reflection mediated by language.

> At 11.30 without exception we sit down. Either to make a communication to friends, usually there is something to tell, but we always communicate what happened in the class, what we've done and how we've done it; to pass on to others the whole process and eventually when there is no communication we agree in the group on what to do. (Patrícia #1)

This statement underlies a view of children as knowledgeable and competent to teach others. Community building was not only seen to operate at the classroom level but also at the school level and sometimes beyond. This means that children were viewed as people who could contribute to the community with their knowledge, and have some impact by expressing their opinions and perspectives thus promoting change. Patrícia particularly expressed this view when she talked about communication with others outside their class (Appendix 22 'Transcripts from CT Magnólia' 1). Patrícia also includes in community building, the ability of children to gain from learning to interact within a group during CT. Listening to others and taking turns were important skills needed for participation in a community, as she mentions in the next extract.

The second goal of CT was, according to Patrícia, to promote a process of *learning* through language use and communication. Based on the principle of learning as an interactive process, clearly highlighted by the MEM model, Patrícia highlighted the complementary function of language and communication with the action experiences (hands-on) prominent at Activities and Projects time. This process, according to Patrícia, allowed children to organise their own thinking.

> .... Children learn several things simultaneously. Organizing their thinking in order to say what they want, learning to wait for their turn to speak, the capacity to listen to others and to understand the importance of what the others have to say, what they can learn from that...(Patrícia #4)

Patrícia did not express the view that CT provided an opportunity for formative assessment by self and peers to take place, as is highlighted by the MEM pedagogical model (Niza, 1996).

Children's perceptions of CT

Some children in the Magnólia class had only a vague idea of the time when CT took place (children's interviews: "routine, piloting tools and group situations"). When children were asked about their daily routine, only three of the twelve pairs mentioned doing something between break time and lunchtime. From these, none of the children mentioned that they would present their work to others before lunch. Instead, they all said that there was a meeting taking place where they "sometimes listen to stories". This finding might be related with their experience of CT activity being irregular, and involving different types of episodes.

When they where asked to explain what they where doing in the CT photograph, most of the older children said they were showing the pirates project to the group, but the younger ones could not recognise what they were doing. Throughout the interview, the Magnólia children expressed their understanding of CT as something done at the end of a project, which was in fact what mostly happened. However, this fact might also be due to the photograph used in the interview, which represented two boys presenting the pirates project.

Children in the Magnólia class (except the youngest) had a view of CT as an activity where some children show and tell others what they have done/ found out in projects, and the others have the opportunity to see and listen to them.

R and, why are you showing things to the other children?

J(6:3) Because our friends want to learn and we are explaining.

The teaching role of the presenter was clearly emphasised. The teaching / learning perspective expressed was a rather passive transmission of knowledge where the audience children's role was to watch and listen. During the interviews in the Magnólia class the children did not refer to any interactive process during CT between the presenters and the audience.

Relating to the group evaluation of the work presented, one Magnólia child mentioned "applause in the end" but no critical evaluation. This idea of celebrating with others the

work of a group of children was also expressed by others. One Magnólia child said that CT was about "inviting friends to our class" and some children mentioned the enjoyment they experienced when showing their work to others. One boy stated that he sometimes had tears in his eyes (becoming emotional) when presenting. Children were proud of presenting at CT and felt valued in the context of their class community.

The teacher and the older children in Magnólia shared a view of CT as an activity where children would show and teach each other about their learning experiences, as well as celebrating their achievements. Patrícia also understood CT as deepening learning through the use of language. The youngest children at Magnólia had a diffuse understanding of CT. (Appendix 11 'Summary of teachers and children's views of activities' 8).

8.2.3. The roles and opportunities for participation

In the Magnólia classroom, as in Amoreira, the children and the teacher took on three main roles during PRE episodes.

The *Facilitator*'s role was the same as at Amoreira. It was Patrícia who most often assumed this role, but the presenter children sometimes assumed this role, organizing the materials and regulating children's intervention and behaviour. This was particularly visible when Patrícia assumed a more neutral role (for example in Magnólia 9 episode 1).

The *Presenters'* role in Magnólia classroom entailed showing and presenting their work, explaining how they did it and providing rationales for their actions / decisions, supported by Patrícia.

The *Audience* role in Magnólia CT included paying attention to others' presentation of work, commenting, interpreting, understanding, relating it to their own experience/ knowledge, co-constructing, and praising the presenter(s).

Although Patrícia usually came to an agreement with the small groups during A&P time on what they would present in CT, it was in fact she who decided which ones were worth "showing" and which ones were not: usually, it was project-related work that Patrícia considered of interest to be communicated to the group. This selection reduced other types of activities to a lower learning status and did not provide equal opportunity for those children who did not participate regularly in the projects: most of the youngest

ones and some of the oldest. The power that Patrícia retained for herself, in deciding who was going to present or what was going to happen in CT, also kept the children in the passive role of being told by the teacher what was going to happen.

The analysis of the children's participation in CT throughout the year (Appendix 20 'Patterns of participation at CT') shows that the opportunities children had to engage in different roles were not equally distributed. Some children (three) did not get the chance to present their work throughout the year, and five presented only once. The presentation of work was concentrated on the oldest children, leaving very few opportunities for the youngest ones. Oldest children were the ones most involved in goal-oriented activities and projects, the ones that Patrícia most valued.

8.2.4. Mediated inter-action in Magnólia CT

Using language towards goals

A common structure of PRE episodes during CT emerged from the analysis of the PRE episodes during the year. This structure includes different actions in a quasi-fixed order:

1) Showing / telling and describing, explaining;
2) Questioning and commenting;
3) Evaluating (mainly praising);
4) Extending, complementing and planning future developments.

As at Amoreira, not every action appeared in all PRE episodes, and also their order was not fixed. The analysis of the videos and field notes showed that while 'showing / telling and describing, explaining' were present during all the episodes, this was not true of the other three actions. In fact, 'commenting and questioning' were only present in 12 of the 33 episodes analysed, 'Evaluation' occurred only in 11 of the 33 episodes and 'Extending, complementing and planning future developments' in 17 of the 33 episodes.

Within this structure, children were engaged in different actions, which pursued different goals and made use of the tools (language, gestures, products) in different ways.

Showing/telling and describing, explaining

B(5:5) " I wanted to find out how many children had lost teeth..."

Usually presentations started with a focus on the product which the children showed to their classmates and an explanation of its main goal.

1 **Teacher** B (5:6) has his work about teeth to show to you and to explain how he did it and what he found out.... So B, first you are going to explain to your friends what ... first what did you want to do with this work... (Patrícia holds B's work so that the group can see it)

..... (management of behaviour)

2 **B (5:6)** I wanted to find out how many children had lost some teeth.

(B looks a bit embarrassed and Patrícia gives him some time. B starts speaking to Patrícia in a low voice.)

3 **Teacher** It's not for me!

(Rd(4:0) is playing with M (4:0) and J(5:8) is not paying attention to B's presentation)

4 **Teacher** Rd! I'm sorry but we've agreed that when a child speaks we have to listen so that we respect each other, didn't we friend? B is going to tell us about the work he did so now, Rd is going to stop playing with Mt and with J and is going to listen to B, ok? (the children accept) Ok B carry on..

5 **B (5:6)** I wanted to find out how many children have lost some teeth ...

6 **Teacher** Yes... (teacher starts writing what B says in her notebook)

7 **B (5:6)** There are more children who have not lost any teeth than children who have...(teacher continues to write)

8 **Teacher** First you have to explain to them what you have done, don't you?

9 **B (5:6)** First I had to copy the names .... And then I wrote the numbers. (B points to his work while explaining)

10 **Teacher** So which one is your first piece of work? (she gives B the paper with a list of names) Show us and explain what you did first...

11 **B (5:6)** First I did this one (he raises the paper so that the group can see) (Patrícia confirms nodding)

12 **Teacher** Those are the names copied .... Perhaps you ought to explain what this is here up front (in front of the names). So, what is that?

13 **B (5:6)** These are the children who have lost some teeth...

14 **Teacher** So... and how did you find this out? (points to the numbers in front of the names)

15 **B (5:6)** I went to ask the children...

(Magnólia 1- episode 2)

In the above extract B (5:6) started his presentation by stating the goal of his work (lines 2 and 5), after being prompted by Patrícia to do so (line 1). Patrícia was very keen that children followed a specific structure for the presentation, modelling to B (and the

group) how to use this as a tool for thinking (structure). This structure fosters a culture of learning where activities are goal-directed and each action or process is working towards the achievement of the general purpose. In his presentation, B (5:6) jumps from stating the goal of his inquiry to the result he reached (line 7). Patrícia made him focus on the process (actions, strategies, developments) but always relating them to the intended goals: copying names is needed for making a list of all the names in order to collect information (number of teeth that had been lost).

At the Magnólia classroom, the work children presented was always carried out with a clear a-priori goal. Such activities were meaningful and purposeful rather than exploratory or incidental, and link the decisions on what to do and what mediating tools to use with those goals (del Río and Álvarez, 2002). Patrícia valued the purposeful child, one who thinks before acting, and the inquiring child who poses questions about the world around him/her and then follows this up to find out answers, validating purposeful actions: B (5:6) was 'teaching' other children how he answered a question (how many teeth each child in the class had lost) by doing a survey in the class.

The analysis of children's talk about processes showed that it included different reflections on the learning process and displayed different information to the group: how (processes, time sequence of actions); resources (with whom, using which materials); rationales for decisions; and products (What they found out) (Appendix 22 'Transcripts from CT Magnólia' 2).

Sometimes, principally when children were expressing some difficulty, Patrícia modelled the children's use of language presenting on their behalf (for example in part of Magnólia 1 – ep. 2; Magnólia 7 – ep 1, 2, 3 and 4); she rephrased and extended children's speech, supporting effective communication.

Patrícia's questions elicited children's explanations and reflection on the goals of the activities and the processes they went through in order to produce the piece of work they were presenting: "How?", "What have you done first? And then?" Patrícia's questions also promoted the negotiation and creation of new meanings.

The process of providing rationales for decisions or judgements during activities sometimes involves a complex thinking process taking place while speaking. In the next extract, three presenters T(6:1), Dn (5:10) and C O (6:4) were explaining to the group why they chose one particular news article (reporting a bombing in Afghanistan) from

the newspaper to discuss with their classmates. While they tried to explain, the audience got involved and together they co-constructed a clearer account (finding appropriate words) of what the newspaper was reporting using different strategies to interpret the written message and the photograph.

1 **Teacher** So perhaps you now have to tell us why you thought that that was the most important one.

2 **T (6:1)** Because this one …

3 **Dn (5:10)** This one has fire!

4 **T (6:1)** This car is on fire.

5 **Dn (5:10)** No! A truck.

6 **Teacher** Why did you think this was important?

7 **C O (6:4)** Because … because, because the things … because it has more fire and the fireman had not arrived.

8 **B (6:1)** Or wasn't it because of the people …(who died) the people.

9 **C O (6:4)** and then people died.

10 **T (6:1)** Some people died (makes a gesture with her hands emphasising her correction of C O's words)

11 **Dn (5:10)** Some didn't!

(CT Magnólia 9 – ep. 1)

Patrícia wanted the presenters to explain the rationale for their decisions and they supported each other in clarifying the rationale and being clear about what had happened in the news report. They took each other's contribution and added to or rephrased it, in order to achieve a more accurate description and rationale (lines 3, 4, 5, 10). One audience child, B (6:1), intervened and contributed with a different interpretation of the facts (line 8), and the presenters accepted it and elaborated from there (9, 10, 11). This process of co-construction between the presenters, Patrícia and the audience showed that they supported each other in describing the processes, and also that they constructed a common understanding of the subject with the contribution of different children and the teacher, showing some characteristics of both cumulative and exploratory talk (Mercer, 2000; Mercer and Wegerif, 2004). It is important to say that this level of co-construction did not occur frequently during *showing, telling and explaining*. These explorations of ideas occurred in only a few cases, when Patrícia was not in control of the work being presented. On most occasions though, Patrícia knew very well what the presenter did and conducted the presentation in a more direct way.

On these occasions, even how and why questions, which are open questions, turned into closed questions, as Patrícia wanted them to say what she already knew.

Questioning and commenting

> Fd (6:0) "What about in the army? There aren't many dead in the army..."

Once showing/telling and describing ended, the group was sometimes (11 out of 34 episodes) invited to question and comment on what had been presented, contributing to the common understanding and extension of meaning.

In the following interaction T (5:6) makes sense of B's work, expressing her understanding of how B organized the information he collected.

> (B finished presenting his work)
>
> **Teacher** did you understand? Yes?
>
> **T (5:6)** One, two, three, and this one here which is the one without teeth (she makes gestures pointing to the different groups of children)
>
> (CT Magnólia 1 – ep. 2)

Sometimes audience comments and questions naturally arose during the presentation, and they were the starting point for future development. Patrícia modelled an inquiring mind, eliciting children's further questions and plans (i.e. 15.09.03 ep 1; 15.10.03 ep 2)

> **Teacher** That was it! The sugar disappeared into the water. ... and does this happen with other things too?
>
> **B (5:5)** Some do but others no.
>
> **Teacher** so, how can we see which ones disappear? What can we experiment with?
>
> (Magnólia CT 15.09.03 ep 1)

The effective use of questions by the children was sometimes constrained by Patrícia's pedagogy. Her dialogues with the audience children during *questioning and commenting* affected their participation and the type of engagement in questioning and commenting.

> At the end of B's (5:6) presentation of his survey on lost teeth, Patrícia invites the other children to ask questions.
>
> 1 **Teacher** Does any of you want to ask B any question?

2 **Sb (5:1)** I want!

3 **Teacher** So, do it Sb.

4 **Sb (5:1)** aha, ...I ... the teeth that I lost ...

5 **Teacher** A question. A doubt about this work.

6 **Sb (5:1)** This one?

7 **Teacher** Yes. The teeth that you lost B already knows. Because if you come and look up here your name ...(T follows with her pen the names) it's here... he knows that you have not lost teeth because you are here with the children, who have zero lost teeth.

(some children get closer in order to see)

8 **Sb (5:1)** I haven't lost any.

9 **Teacher** Ok! What Patrícia was asking you was if any of you had a question about this work to ask B.

10 **J (5:8)** I have.

11 **Teacher** What is it J?

12 **J (5:8)** (gets closer and points to B's work) If I search here in number one I know where my name is.(points to his name)

13 **Teacher** Yes, because you have lost only one tooth, haven't you?

14 **J(5:8)** (nods)

15 **Gç (5:9)** Me!

16 **Teacher** So, say it Gç.

17 **Gç (5:9)** I have lost two teeth.

18 **Teacher** No. That's not a question.(rejects firmly)

19 **J St (5:1)** I have one Patrícia.

20 **Teacher** Look Gç what you just said we already know. You just said that you have lost two teeth. That's not a question.

21 **?** I have.

22 **Teacher** A question is "Gç do you know how many of my teeth have already fallen?" And he would come here and say "Yes Gç I know. Here are the children who have two fallen teeth and that's what happened to you. That's it.

(The children comment to the ones beside them but no one offers to ask. Patrícia moves on to elicit assessment.)

(Magnólia 1- ep. 2)

In this extract, Patrícia did not accept some the children's comments as they "were not questions" and "taught" the children what a question was. Particularly in her feedback to Gç (5:9), (lines 18, 20, 22) Patrícia stressed the inaccuracy of his comment and

instructed him about questions in a directive and formal way. This assertion of control over the accurate way of doing things might have discouraged other children from trying to participate in the dialogue, fearing inaccuracy. Although Patrícia did not comment directly on Gç's (5:9) abilities, there was an implicit message that his contribution was not a 'clever one' (line 20). Such type of feedback was present in several interactions where Patrícia expected the children to think in an elaborate way: *"your head is not thinking well" (22.09.03 ep 1), "when we do not listen we don't think and when we don't think we say rubbish" (19.01.04 ep 2).*

The pedagogy of Patrícia in PRE episodes varies significantly in several aspects, and so do the children's participation and use of questions and sharing ideas. In the Magnólia 9 ep. 1 children asked several questions related to the content of the news; they discussed the issue of war and engaged in a long process of discussion and negotiation of meanings. The discussion about the difference between going into the army and the war flourished after Fd (6:0)'s question "*what about in the army? There aren't many dead in the army...* "and was sustained for 10 minutes with great involvement from most children including some of the younger ones. The children explored their perceptions, grounded in their everyday lives, about war and about going into the army (TV news, relatives going to the army).

As the analysis of the Amoreira CT showed, when children were involved in commenting on more open issues (without a right or wrong answer), they showed more willingness and greater ability to ask questions. The discussion about the difference between war and army in the Magnólia class, developing from what they had found out in the newspaper, was just the type of issue that sparked a more open dialogue. Patrícia recognised and supported the children's interests and gave them space to interact.

Evaluation

Teacher	What is cool?
J St (5:1)	It's writing properly, not to write silly things …
Teacher	Exactly! It is very well written…

Despite the fact that in the interview Patrícia did not emphasise the process of group evaluation, this also occurred in 11 of 34 PRE episodes. The analysis of the *evaluation* interactions showed that they were mainly concerned with praising the presenters' work and providing applause. If some children engaged in a critical appraisal of the

processes, Patrícia did not encourage thinking about difficulties or mistakes but emphasised the final achievement and invited the group to praise the presenter (24.03.04 field notes; Magnólia CT8 ep 2). The way in which the evaluation of the presenters' work was used at the Magnólia class emphasised the goal of the activity as a celebration of learning by the group, and not so much as a reflexive tool for learning.

Despite such a limited use of evaluation for learning, Patrícia encouraged the children to use criteria for positive evaluation of classroom work, conveying an idea of what "good work" was.

> At the end of the presentation by B (5:6), Patrícia invited the children to evaluate his work.
>
1	**Teacher**	What did you think of B's work?
2	**Several**	Cool!
3	**Teacher**	What did you think of B's work?
4	**Several**	Cool!
5	**Teacher**	Look, I don't think it's only cool. I think that it's ...
6	**Several**	Beautiful!
7	**Teacher**	It's not only beautiful either.
8	**?**	Beautiful...
9	**Fr (5:0)**	Very nice...

> (Teacher interrupts for behaviour management)
>
10	**Teacher**	Because (referring to her intervention on misbehaving children) B is presenting a work that is very well done and the two of you spent the time of communication making noises with the box... But now, in relation to this thing B did. What did you think? Only cool and beautiful?
11	**Several**	No!
12	**Teacher**	What's that? What's beautiful and cool?
13	**Pt (4:1)**	Patrícia, when I was a baby I lost one tooth.
14	?	It's cool.
15	**Teacher**	What is cool?
16	**J St (5:1)**	It's writing properly, not to write silly things ...
17	**Teacher**	Exactly! It is very well written...
18	**Gç (5:9)**	It's well done!
19	**Teacher**	It's very well done!

20 **Teacher** He divided (she makes a gesture indicating the different columns in B's work) don't you think he divided the children … very well divided?

21 **J (5:8)** Yeeees!

22 **Teacher** Congratulations B! (she puts her hand in B's shoulder. The group applauds).

(CT Magnólia 1 – ep. 2)

The evaluation of B's work turned into a consensus perhaps because there was a visible satisfaction shown by Patrícia with B's (5:6) work. Patrícia's emotional expression of satisfaction did not give the audience the possibility of looking at B's work with a critical eye. Patrícia asked what the children thought of B's work, but throughout the interaction she conveyed quite a different question to the children, which was "What do I think of B's work?", clearly expressed in line 5 *"Look, I don't think it's only cool I think that it's..."*. From then on, the children tried to guess Patrícia's thinking instead of thinking about and commenting on B's work. Patrícia also conveyed the idea that children's comments or views were not all of the same value, according to her own hidden criteria for evaluation, which were not explicit and therefore became difficult for the children to grasp.

Patrícia herself used general evaluative comments on B's work when speaking with the misbehaving children in line 10, *"B is presenting work that is very well done"*, modelling the children's appreciative capabilities. They became limited by their will to comply with Patrícia instead of being free to think for themselves and reflect on what they had seen. At this stage, the children used what they knew of Patrícia's ideas and values concerning children's learning – line 16 *J St (5:1) – It's writing properly, not to write silly things ...*

Later on she tried to introduce another descriptive criterion (line 20), *"being well divided"* (organizing information), but failed to explain it further (apart from a gesture), in a way that was less abstract and more understandable by this group of young children.

The analysis of the criteria used in all the PRE episodes' evaluation (Appendix 22 'Transcripts from CT Magnólia'3) showed that, as well as general praising comments ("well done", "beautiful"), there were other, more descriptive and explicit criteria for evaluation (praise). Most of the criteria used in evaluation of children's work during CT were concerned with processes. However, Patrícia tended to use evaluative criteria

rather than descriptive ones and sometimes these were too vague. In the Magnólia CT9 – ep. 1, Patrícia made an evaluative statement, "*it was a very important choice*", but failed to explain why, in her view, it was important. The use of mainly evaluative comments did not supported the children's appropriation of the learning tool-kit. When she used explicit criteria for evaluation, using more descriptive rather than evaluative comments, Patrícia gave children tools for them to reflect and criticise using specific legitimate learning processes. The teacher had an immense power over this appropriation process not only because she conveyed her way of looking at things, but also because as an adult she was a powerful model for the children. The analysis of the criteria conveyed in Magnólia CT legitimised certain types of work (inquiry, being clever, organizing information, goal-oriented activities, and finding important things) over others (for example: exploratory play; games; constructions; drawings). In children's interviews, the Magnólia children mentioned project work as important and "just playing" as something that was not valued by Patrícia but permitted. Although not so explicit about the evaluation criteria, Patrícia's views of "valid activities" were strongly conveyed and appropriated by the children.

Extending, Complementing and planning future developments

> *The children tell the group about the rhymes they discovered and Patrícia suggests that they could try to find out more rhymes. The entire group participates. (19.01.04 ep 2)*

Many of the PRE episodes (17 out of 34) in the Magnólia classroom ended up with the group engaging with the presenter(s)' work, extending and complementing them and planning future activities, as opposed to the Amoreira classroom, where presentations of simple activities did not extended beyond CT. Patrícia encouraged children to follow up and deepen their work.

> Francisco recalls what happens while they were doing the story and Sebastião gives his view of the event. Patrícia clarifies with Sebastião and asks what they will do next. They decide to finish the story and Patrícia says that she will help them. She says that she will write in the diary so that they do not forget. They plan when to finish.
>
> (19.09.03 CT1 audio)

In CT 1, some children presented a story they wrote in the morning and together they decided to continue the story with more drawings and edit it in a book. Patrícia wrote in the diary "we want to finish the story". On other occasions they engaged in writing a

letter (19.01.04 ep 1; 04.02.04 ep 1), rewriting a text (CT7 ep 6), finding out more rhymes (19.01.04 ep 2), and enriching a recipe for the kitchen (CT8 ep 2) in order to continue or to improve on what was, before then, an individual or small-group activity.

On several occasions, Patrícia built on the children's commentaries and asked "how can we find out?" (15.09.03 experiment with salt; CT1 ep 4 ; 22.09.03 ep 1 cream project; 15.10.03 ep 2 teeth project; CT9 ep 1 discussion about war and inquiry on human rights) inviting the children to pursue an inquiry. This was particularly present when the children presented parts of a project or a goal-oriented activity, including many actions such as answering letters (CT 6 ep 21), planning PE sessions (CT8 ep1), or cooking activities (CT8 ep2).

Teachers' records

Patrícia used her notebook to take notes during CT PRE episodes, but this time she did not voice what she was writing. This strategy, which she used consistently, did seem to have an impact on the interaction with the group during CT. When Patrícia was writing, and not intervening so much in the conversation, the children seemed freer to engage with each other, and to discuss and explore ideas. Patrícia used such notes to enrich children's learning documentation (Appendix 10 'Documentation in Magnólia').

8.3. Communication Time summary

This section summarises characteristics of CT, its function within the MEM model, the processes generated in the two classrooms, and the potential of this activity for children's learning to learn.

What were the critical features of CT?

CT activity is a whole-group language based activity that complements children's individual and small group experiences during A&P time. Through the use of language and with the support of their activity's products, children are invited to revisit their first hand experiences presenting them to others.

The goals of CT as perceived by the two communities were centred on two distinct but complementary aims: community building (sharing, celebrating work/ learning) and learning (through reflection, collaboration and co-construction but also through listening to peers).

These goals are in agreement with the MEM model valuing communication as a sharing experience aimed at producing new knowledge and development (Niza, 1998; González, 2002), and one of the several occasions for "dissemination and sharing the cultural products of the community work" (MEM, 2006).

Beyond these goals, CT did also promote in each community a validation of the 'legitimate learning' processes and products, contributing to the establishment of particular communities of learning. As Niza points out, "The validation of learning gains more meaning throughout its communication to peers for assessment and confirmation" (Niza, 1996:145). The evaluative discourse (what is valued as learning, the teacher's feedback focus and content), is part of a class learning culture conveying powerful messages of learning such as 'what is learning', 'how we learn', impacting on children's learning to learn.

Showing products to others became a celebration of learning/work in the two classrooms. Presenters showed a clear enjoyment and pride in presenting their work and the audience, paying attention to what they had done, and acknowledging their value. A celebration of learning through public presentations can act as a motivating factor for children, encouraging them to put effort on what they do, to feel enthusiastic about

starting new projects, and engage in activities they wouldn't be naturally disposed to: "celebration invokes future work" (Resnick, 1995:59).

One of the characteristics of CT is that it ties action and reflection. This feature is seen as an effective learning process which is highly regarded by some ECE pedagogical models: the 'plan-do-review cycle' of the High-scope curriculum (Sylva, 1992; Epstein, 2003) and 'documentation' in the Reggio Emilia approach (Rinaldi, 2001). Communication in the MEM pedagogy shares some similar functions and purposes of these other models namely the reflection through representation (either verbal or/and visual) about children's activities and processes. CT in the MEM approach, however, is also an activity towards building a sense of a community of learning where responsibility for learning is shared and children learn to make sense of their own experiences with the collaboration of the group.

Another critical feature of CT observed in this study is that children have a central role. The division of labour in a community of learners requires that although teachers and children do not share an equal relationship (status), the teachers should allow children to progressively take over some of the responsibilities for leading activity, taking decisions and increasing their participation (Rogoff, Matusov and White, 1996; Rogoff, Turkanis and Bartlett, 2001). The nature of CT placed children at the centre of the teaching role, presenting their learning experiences and products to the group, while inviting the audience children to provide feedback, commenting, questioning and suggesting. These are all part of the traditional role of the teacher, which the children progressively learnt to adopt. This is a characteristic that has been identified in communities of learning where all are teachers and learners and knowledge has a shared ownership (Wells, 1999; Rogoff, Turkanis and Bartlett, 2001; Watkins, 2005b).

The CT activity itself structured the roles of both teacher (facilitator, coaching presenters and audience) and children (presenter, audience) but did not determine a hierarchical relation between subjects and their possibilities for participation. It was the individual pedagogy of the teachers reconstructing their own roles as well as the ones of children, which to a certain extent determined what kind of social organisation (egalitarian, hierarchical) was operating in the class community. The MEM movement aims clearly at an egalitarian, rather than hierarchical social organization but as we've seen, in practice this is not always fully achieved.

In this study, the observed CT included several 'presenting' (PRE) episodes, containing different actions, which structured the development of the activity and the learning processes generated, as well as the roles of the participants: 1) showing, telling and describing; 2) comments and questioning; 3) evaluating; 4) complement and ideas for improvement.

How did CT, as practiced in the two classrooms, enhance or constrain children's learning to learn?

The analysis showed that the basic structure of CT PRE episodes provided children with the opportunity to engage in metacognitive thinking and metalearning, using language and their products to represent their (sometimes emergent) learning activities. Moreover, children were able to engage in co-construction processes and "sustained shared thinking" with the teacher and peers and profit from the contribution of the group to their own learning processes. Yet, the analysis has shown that in order for such processes to occur, certain conditions have to be met (see teacher's pedagogy below).

One interesting aspect of CT is that it provides opportunities for "making learning visible" and, therefore, the object of reflection and dialogue. Making learning visible is one of the crucial conditions of learning to learn (James, Black and McCormick, 2003). In both classrooms there was evidence that learning was made visible in terms of different processes, from simple play activities (mostly with a tangible product) to goal-oriented activities and more complex processes of inquiry. When children were invited to talk about their activities and products, they did at times engage in metacognitive thinking and metalearning which included reflection on goals, feelings, social relations and the context of learning which were the object of shared reflection and appropriation by the group. This metacognitive process focused on actions involving simultaneously, doing (physical) and thinking (cognitive, affective) what Watkins (2001) refers to as metalearning. In the early years though, children are just beginning to understand their actions as learning activities. This was evident on some occasions in CT, but not always.

Peer-tutoring was a strong component of CT, although it was understood and realized differently in both classrooms in terms of the interaction between the presenters and the audience. At the Magnólia classroom, the process was sometimes a rather passive process for the audience who would be asked to listen quietly and attentively to the

presenter(s), while in the Amoreira classroom peer-tutoring included a more interactive process where both the presenters and the audience supported each other, negotiated meaning and co-constructed new understandings with the critical contribution of all. The analysis showed that when children engaged in group interaction, the opportunities for reflection, experiences of variation of thought, use of mentalistic language and reasoning were enhanced.

Only five (out of 238) PRE episodes at the Amoreira classroom concerned children's pretend play. As shown by the analyses of Activities & Projects, children in both classes engaged frequently in pretend play and other exploratory and spontaneous activities in different areas. Van Oers (1994; 1999a) idea that speaking about and depicting play activities and representing them (semiotic activity) promotes a transformation of play into a learning activity, supports the potential of CT to foster such change. In both classrooms, the 'Home corner' experiences were not talked about and discussed, neither in CT nor during A&P, which was a lost opportunity for children to be challenged and learn within one of the most stimulating areas of human art – drama.

Even though PRE episodes involved the presentation of a tangible piece of work, the interaction between the groups were concerned with the processes that the children engaged in during the production of their work, and not so much with the quality of the product itself. When the focus of children's learning rests on products, children may become anxious about not getting the right result, while not knowing what to do in order to overcome difficulties, and therefore developing helpless instead of mastery learning behaviours (Claxton, 1999; Dweck, 2000). According to the MEM model, 'The assessment judgements fold from a dynamic interaction between the processes and the products' (MEM, 2006).

The data have shown that the evaluation part of CT was of crucial importance for children's learning identities and for their mastery of the process of learning. This action, though, should go beyond celebration of achievements by the community and should not act only as general praise; the literature suggests that just praising children is not in itself a positive factor, and in many learning contexts can negatively affect children's learning dispositions (Balson, 1992; Kamins and Dweck, 1999; Dweck, 2000). The use of both criticism and encouragement in assessing children's work - formative assessment (in the Amoreira classroom) seemed to provide children with future tools for learning (criteria, strategies) and dispositions to persist in the face of

difficulties. In the Magnólia classroom, the group did end up in many PRE episodes engaging with the presenters' work achievements, extending and complementing them, and planning future activities. Such follow-up of children's work also provided children with opportunities to stretch their learning with the support of the group.

It is not easy define an abstract value for CT in children's learning to learn without considering the individual reinterpretations of CT in each class and what the analysis showed to be the implications for children's learning to learn in each community.

CT and the teacher's pedagogy

In many respects, both teachers shared a similar understanding of CT. However, they differed in some ways in how they perceived, organized and conducted the activity. The main difference was that while the Amoreira teacher saw CT as a time when children's work was shown and discussed (assessment for learning), for the Magnólia teacher CT was where children showed and told others about their achievements (in projects or other complex activities), and learning was celebrated (rather than critically appreciated) by the group; the decision on what was "important" to be shown and "passed" to others was made by the teacher. The restraint of a critical discussion about children's work in the Magnólia classroom was a lost opportunity in terms of children's learning to learn in a community of learners.

Another critical difference emerged from the way in which both teachers interacted with the children. The patterns found in CT were in some ways similar to what emerged before in other activities (CM and A&P), and were therefore linked to the teacher interaction style. The inconsistency of the Magnólia pedagogical interactions with the children affected the way children participated in different PRE episodes. Indeed Patrícia displayed great variation in: control over children's interaction, thinking, and participation, variation of feedback type, and children's misbehaviours in the group.

The fact that the PRE episodes in the two classrooms focused on different types of activities (the Amoreira on simple activities and the Magnólia on more intricate inquiry processes and discussion of complex issues), reinforced different discourses of learning: action / production (doing something) at the Amoreira classroom and inquiry (answering questions) or philosophical (asking questions) discourses at the Magnólia classroom. As it emerged from the data in A&P, the Amoreira group lacked some encouragement to engage in inquiry processes or more complex activities. Several times

the interactions in CT were inquisitive (for example, the one on aeroplanes) but they did not turn into projects that would develop further the children's ideas. However, although the activities that the Magnólia children presented in CT represented a higher cognitive sophistication in the learning process, the fact that they were the only 'legitimate' learning processes that would be shown and presented in CT might have hindered some of the children (particularly the youngest) from participating in presenting roles, and interacting with the presenters.

Structural aspects of the pedagogy

One aspect that was seen to contribute to children's understanding of the purposes and goals of CT and consequently their full participation, was the consistency of the CT routine. A common understanding of the goal of the activity is crucial for involvement in meaningful learning activities (del Río and Álvarez, 2002). The lack of transparency did prevent some, particularly the newcomers in the Magnólia class, from full participation and also reinforced the power of the teacher during the activity.

The rules that determined who was going make a presentation had particular implications for the activity in each classroom. The children's control of the PRE episodes (deciding who was presenting) gave rise to an excessive number of presentations at the Amoreira CT, and poor interactions in some PRE episodes as a result of a time shortage. On the other hand, because children themselves decided what to present at CT, the teacher was sometimes unaware of the work children would be presenting, and so participated with a similar level of information and status as the audience. Thus, instead of asking questions to which she new the answers in advance, she asked more genuine questions trying to understand what the children did and how they did it, and engaged in genuine dialogue (Wood and Wood, 1983; Tizard and Hughes, 1984; Cazden, 2001).

In the Magnólia classroom, some children had no experience of presenting at CT and therefore were never given the opportunity to benefit from the role of the presenter and its particular learning processes. Moreover, they were often not recognised within the group as children who had something important to contribute.

The question of how many presentations each CT session should accommodate, and how they should be selected, needs to be explored further. Too many presentations do not permit a deep reflection, but at the same time, they ensure that all children have the

opportunity to present their work. Perhaps it is important to have a piloting tool to regulate participation over the year, in order to ensure equal opportunities for all children without too much control from the teacher.

The size of the group might have hindered the chances of the Magnólia class to set up a community activity with all children participating and engaging in interactions. This difficulty was also present in CM. Yet, the analysis highlighted that building an inclusive and participatory community did not depend on the size of the group only. The sections on CM and A&P showed how particular features of the teachers' pedagogy impacted also on the way children interacted, building a community where everybody was listened to and respected.

How children became full participants in CT

In the Magnólia class, young children's peripheral participation changed mainly in the cases of children who throughout the year, became involved in what was seen as 'legitimate learning' (inquiry, complex activities) during A&P. The Magnólia's teacher understanding that children should not be encouraged to participate in activities they were not naturally inclined to do or confident about, again (as in CM and A&P) failed to promote individual progress: she did not acknowledge that there could have been constraining factors that were hindering children from participating. Children who were never 'invited' to share their work with others, may build a less valued view of themselves as learners.

In the Amoreira classroom, as all children had the opportunity to present, all children had the opportunity to benefit from engaging in the different roles and processes. Moreover, the teacher was conscientiously concerned about the less participative children and made deliberate efforts to involve and support them in interactions, through modelling and scaffolding language and thinking. The end of year video showed more metalearning language and talk and the more frequent use of mentalistic language.

The CT analysis showed that, despite similarities, the way each class re-interpreted the 'ideal' CT MEM model gave rise to two slightly different cultures of learning which, as shown also in the CM and A&P analysis, and the two contexts analysis, configured two diferent communities of learning.

Chapter 9 Concluding discussions

This final chapter will revisit the research questions and discuss the findings of the case studies, which illustrated the MEM ECE pedagogy in two pre-school classrooms. The implications for further development of the MEM model and teachers' practices are discussed. The resonance of the study findings will be considered in relation to the way they contribute to the understanding of the role of pedagogy in mediating, from a very early age, the development of the life-long learner.

9.1. The MEM model for ECE pedagogy

9.1.1. Complexity of practice

The first question was aimed at understanding the MEM model in practice in two pre-school classrooms. Practice was taken to "include what is said and what is left unsaid; what is represented and what is assumed... The concept of practice highlights the social negotiated character of both the explicit and the tacit in our lives" (Wenger, 1998:47). Investigating the MEM model for ECE in practice entailed understanding how the formulated – reified 'ideal' MEM model for ECE related to the two practices studied. In no case can classroom practices be a direct application of an 'ideal' model based on a theoretical conception of a classroom. This thesis looked at how the participants made use of an array of reified tools through participation in their specific communities, to jointly create meaning. The creation of meaning in the MEM classrooms was the product of a complex interchange between the way the teachers understood and implemented the MEM model, their interactions with the children during activities, and the contextual circumstances of the participants and of the institutions they belonged to. Such complexity of practice was apparent in the two classrooms, where the coherence with the 'ideal' model was mediated by some epistemic, structural and dynamic factors.

9.1.2. Practice landmarks in applying the MEM model

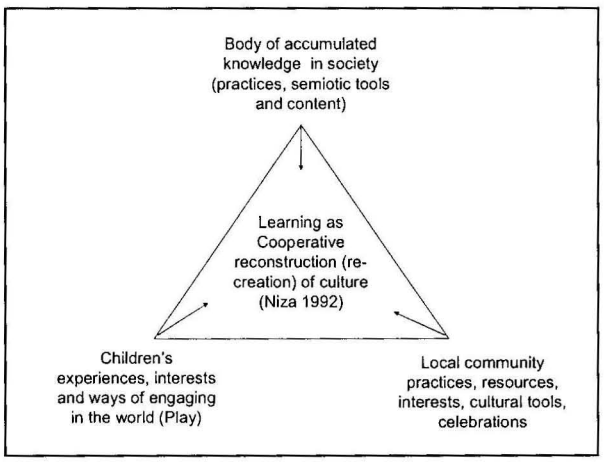
Learning as the cooperative reconstruction of culture: play, work and the production of cultural 'oeuvres'

The study looked at classrooms as communities of learning in accord with both the MEM model for ECE, and the CG for pre-school education. This entailed understanding a community of practice with learning as a 'shared endeavour' (Wenger, 1998), which

in fact constitutes a challenge for some ECE classrooms. While the understanding of learning as the purpose of the community activity was clear for both teachers, the study revealed that this was not always clear for all of the children. Towards the end of the school year (April/May) about 39% of the children (mainly the youngest) included external causes in their reasons for coming to school, compared to about 34% assuring they were coming to school to learn.

The analysis of teacher's interviews, the "Classrooms Curricular projects" and "Individual Plan"(Magnólia) reported in chapters 5, 6, 7 and 8 included a clear view of learning as the focus of pre-school. The teachers' view of learning is represented in figure 9.1:

Figure 9.1. Teachers' views of learning



Learning as the 'co-operative reconstruction of culture' (Niza, 1996:141) is viewed as a social process where children engage with people, using materials and different environments to create meanings together in a shared cultural development. This process includes interplay between each vertex (figure 9.1.) representing different 'cultures' (types/sources) with associated practices, content, interests and tools. In the present work, both teachers viewed all three components as playing an important part in children's learning: they ensured that learning experiences were meaningful (grounded in children's experiences, interests and modes of engaging with the world, as well as in the communities' practices, resources and interests) and incorporated at the same time new ways of engaging with the world (practices, semiotic tools and content), including knowledge that has been accumulated in society and that is necessary for children's full participation in and contribution to that same society.

Children in both classrooms engaged in meaningful activities, with a purpose they understood either goal-oriented activities or more spontaneous play within the areas of the classroom.

The MEM focus on production of cultural oeuvres that promote children's identities as authors and the appropriation of methods and tools that are valued in the culture emphasises that learning takes part through engagement in human practices. The illustrations showed how children in the two classrooms produced art and inquiry (Magnólia), books, words files, recipe books with sophisticated record codes, theatres, texts, and acted as authors creating 'oeuvres' which is in accordance with Niza "the joint effort of culture construction is publicly revealed" (Peças, 2005:166).

The content of the teachers' interactions with the children and its structure, built up an epistemic milieu of knowledge construction through 'project conduct' (Niza, 2005). The analyses showed how both classrooms created a context where children adopted the role of inquirers (Magnólia) or workers (Amoreira) but, most significantly, as authors involved in the production of cultural 'oeuvres'. The teachers' questions as well as the criteria for planning and evaluating built up this project 'conduct', central to the 'cooperative reconstruction of culture' in MEM classrooms.

The two communities varied in the way they accomplished this 'co-operative construction of culture', giving rise to slightly different learning cultures according to the emphasis assigned to each vertex (figure 9.1.) as the legitimate foundation for learning. The differences were expressed in the frequency and type of contacts with the community and the integration of the latter into children's learning; in the way the teachers promoted conversations about children's own home affairs or about each others' interests; in the way teachers took children's interests as a basis for involvement in work in different areas of the classrooms, or in projects integrating different areas of knowledge; and in how much children's play was valued by their teachers.

Two aspects observed in some of the classroom practices seem to compromise the full realisation of this view of learning as 'co-operative construction of culture': first, the relationship between play and learning through goal-oriented activities, and second, the use of the concept of 'practising' as the means to learn.

One of the three conditions for the MEM ECE model is that children have "time to play, explore and discover materials and documents to encourage them to question and

'wonder' for themselves and actively engage in trying to understand the world around them" (Niza, 1996:146). The analysis of the Activities Charts (chapter 7), showed that the children in both classrooms had many opportunities to play. In addition, both teachers expressed the view that the youngest children still needed time to play. However, the relationship between play and learning through engagement in goal-oriented activities was not always clear: neither teacher ever engaged with the children in the home corner, consequently this area lacked learning goals. Neither were play activities (particularly at the Magnólia classroom) discussed at Communication Time, which contributed to an under valuation of their learning potential. At the Amoreira classroom some practices provided links between play and learning: the records children made of their activities in the science lab and children presenting all kinds of activities in CT.

In their interviews, only 17% of the Amoreira children associated play with the purpose of coming to school. At Magnólia, 35% of the children (of all ages) associated play with the purpose of coming to school, but only one child referred to both play and learning as the purpose of coming to school. These results indicate that at the Magnólia classroom the community-shared endeavour (for the children) remained split between play and learning. Some children were kept at the periphery of the legitimate learning practices of the community (see section on roles and opportunities for participation). The analysis of both practices seemed to indicate that the MEM model for ECE was not able to offer teachers a clear view about the role of play in a MEM ECE classroom (see section 9.4.2). Pramling and her colleagues, analysing five internationally recognised ECE curricula point out that " to deal with play and learning and the relation between them" (Pramling, Sheridan and Williams, 2004:29) is a crucial issue for curriculum development for young children.

The strong working culture at Amoreira, together with Carolina's emphasis on 'practice' as a means to learn, on some occasions limited the social meaning of practices. The child's role being one of a worker carrying out actions and operations detached from an understanding of a meaningful activity, contradicted the general perspective of the model about learning as co-operative reconstruction of culture through the production of cultural 'oeuvres'. A clearer understanding of the word 'production' and the value of work in such a cultural view of learning that the MEM embraces might be needed.

Communication and a climate of free expression

Communication is a central component in MEM pedagogy (chapter 2.2.1.), as a means for social and cognitive development (Niza, 1998) integrating the processes of 'co-operative construction of culture'. According to Niza, a 'climate of free expression' must be created in classrooms "so that children do not feel policed in their talk, writing, or in the representative and artistic activities in which they get involved" (Niza, 1998:79).

Both classrooms were lively places full of children's individual and joint productions using drawing and writing in a free and expressive way. Children were frequently seen painting, drawing and writing on their own initiative, with great pleasure and involvement and with an expressive and creative sense. This was particularly visible in the Magnólia classroom. The displays of children's learning documentation products were of an impressive quality and reflected clear individual expressions.

Communication was also promoted and supported through several sustained situations (circuits of communication): the Council Meetings conversations about personal matters and home experiences, and the co-operative regulation of learning; the Communication Time, when children's work and learning were presented within or beyond the group in order to be shared, extended and to motivate further work; co-operation and peer-tutoring as privileged learning strategies; dialogic teaching where the teachers' support was grounded in communication with the children's interests, ideas and problems, and negotiation for further development; documentation of children's learning experiences and its display in the classroom; letters exchanged between the two classrooms and with people from the community. Such structure was crucial to support and promote communicative learning processes, but it was not enough, as an effective communicative environment depends also on dynamic factors emerging from interactions. Close analyses of interactions in both classrooms pointed out some interactive processes that appeared to impact on the way they promoted or constrained the development of an enabling community of learning. For example, the ability to create empathy, to listen to the children, and to engage in sustained shared thinking; to make each child feel respected and included, giving all the children a voice in the group; the ability to negotiate without manipulating; the promotion of children's interactions with each other; the ability to adjust expectations and challenges to a child's needs and possibilities by providing adequate scaffolding; the way teachers used questions and

feedback in interactions with the children as well as the way they structured the interactions (rules). These were critical features in the way meaning was created in several aspects of the practices; they will be further discussed in the following sections: cooperative regulation of learning; building up a community; and children's learning to learn.

Cooperative regulation of learning

Both teachers centred their planning and assessment practices in the classroom with the children. These practices reflected the MEM view of assessment as formative assessment (see chapter 2.2.1) or assessment for learning (Black et al., 2003). In order for children to become full participants in steering their own learning, taking the role of " crew and not the passengers" (Watkins, 2005b:47) in a participatory community, the teacher needs to allow them to share in the group planning and assessment practices. This process occurred in several situations in both classrooms during: Council Meetings centred on the curricular activities and the personal and social development; Activities & Projects using the 'Activities Chart'; the teaching dialogues occurring alongside activities and projects; and in Communication Time centred on the products and processes of the learning activities. The way in which these activities and interactions were conducted (structure, frequency and content) in both classrooms gave rise to different regulative discourses and children's attitudes towards learning (see section 9.2. learning to learn). Assessment for learning was at the core of the Amoreira community "*we criticise to improve*" (Carolina #4), where an ethos of shared responsibility was promoted. In the Magnólia classroom, assessment practices were often linked to celebrating the active child and the production of high quality work, rather than fostering learning-oriented planning or overcoming their problems or difficulties: the child's natural curiosity and interest was seen as the major motivation for their involvement in practices. Alongside this weak regulation of children's activities and processes, the teacher strongly directed the children towards co-operative behaviour compliant with the classroom rules and the production of good quality work. This constituted a contradictory regulative discourse between 'doing what I want' and 'doing as the teacher wants' which was less negotiated and co-operative.

The piloting tools were important in supporting the young children's planning and assessment in varied ways. Their materiality and clarity, combining writing with

drawings or pictures, helped very young children to use them with ease. Interviews with the children revealed they had an impressive understanding of the different piloting tools, how to use them and what was their function in the classroom. The present study also revealed that the way in which the piloting tools were used (rules) and the resulting interactions, were of major importance for the meanings created about the functions of each tool, within its own context. The same tool was seen to provide different affordances to the children: for the Magnólia children, the 'Diary' afforded a means to check who behaved and who didn't, while for the Amoreira's it afforded a means to solving their problems. Equally, the 'Responsibilities Chart' afforded choice and pleasure to the Magnólia children, but duty and social responsibility to those at Amoreira. Material tools, as well as psychological ones, have been shown to have perceived properties and potential for goals achievement as well as objective properties (Wertsch, 1998; Claxton, 2002).

Building up community

The MEM model is based on a view of learning as a social practice where learning takes place through interactions, collaboration and shared responsibility. Its basic principles of democratic education are intended to engender a pedagogical model where "The pedagogical means convey the democratic aims of education" (Niza, 1996:142). This entails a particular type of community in terms of the roles and participation of its members, shared power and responsibility and the interplay between the individual and the group.

Roles and opportunities for participation

The children at the two study classrooms had many opportunities to take on diverse roles: chairing meetings, peer-tutoring, inquiring, organizing events, producing plays and books, constructing, producing materials for the classroom, writing, being play-companions, problem solving, supporting others in different tasks, and taking responsibilities.

These children had the opportunity to choose in which activities to engage, responding to their interests and in some cases to their needs (for instance, young children were more involved in play activities and older children were more engaged in reading and writing). However, in classrooms that operate in dynamic ways, where children choose what to do and the group interactions are dialogical, there is the danger that some of the

children may take over the interaction and the most active roles, while others are left on the periphery. The analysis of the 'Activities Charts', 'Daily Plans', 'Diaries', '"I want to show, tell or write" list' and the Projects and Communication Time field notes showed that some children never presented at Communication Time and some never engaged in projects. This was particularly evident in the Magnólia classroom, where the teacher held the view that participation was simply based on children's interest. Her view of what were legitimate learning experiences (intellectually and aesthetically sophisticated 'cultural 'oeuvres') worthy of being presented at Communication Time also impacted negatively on participation patterns, favouring the oldest children and the ones more naturally inclined to engage in such type of work.

In the case of whole-group language based activities, it is difficult to ensure equal opportunities for participation without too much control of the communication. As some studies point out, a fixed rota-system for talk at circle time has been found to produce stereotyped talk and meaningless communication (Housego and Burns, 1994; Cazden, 2001). "Sometimes the negotiation of meaning between children and teacher is inhibited during circle time because the teacher is adopting a particular egalitarian stance" (Housego and Burns, 1994:27). This study indicated that in whole-group dialogic activities, the teacher's constant encouragement to participate, the introduction of clear rules for participation and the "I want to show, tell or write" list promoted an increased participation of children who, at the beginning of the year, were less participative.

The results also showed that some children may become bound to a certain kind of participation (such as the one that gets into trouble; the one that teaches others how to write; the one that always accepts everything the teacher says), and therefore not have the opportunity to change their identity, role and type of participation in the community.

The study found that some things were needed to ensure participation in MEM classroom activities: the use of the piloting tools combined with a periodic evaluation (by the teacher and the children) of patterns of participation; a permanent focus of the teacher on the less participative, finding ways to motivate them to participate; a constant reflection on the reasons why some children did not participate.

Sharing power and responsibility

As the literature review largely exposed, the issue of power and responsibility in a classroom community is an essential element for the MEM aims of democratic education and empowering children as learners (learning to learn).

Both classrooms in this study coherently promoted shared responsibility for learning, as children and teachers negotiated the curriculum in pursuit of both individual and common goals. Children felt free to decide what to do, although choices were mediated by the negotiation of common goals, rules and responsibilities and by the conditions for realisation.

Analysis of the data presented in chapters 6, 7 and 8 showed that the children made use of a considerable amount of power (in some cases the power for non participation), but differences existed in the two classrooms as to the extent to which power and responsibility were shared between the teacher and the children. Signs of such differences emerged in a variety of ways both during the children's interviews and during classroom activities: some children felt free to disagree with and criticise the teacher in an open manner; some children were in control of the organisation (time routine), and understood the purposes/functions of the activities and piloting tools, while other children referred to the teacher as the reason for doing things; some children understood assessment (of behaviour and work) as a way to overcome problems, not fearing the teacher's judgements; some children assumed the right to decide when and whether problems had been solved or not; children felt responsible for each others learning, engaging in peer-tutoring and peer-assessment; children felt free to think and express their thinking.

This study was able to indicate some features that might have positively impacted on the distribution of power and responsibility: the consistency and clarity of routines, rules and procedures, as well as an open and clear negotiation of changes, what Lave and Wenger call the transparency of the socio-political organisation (1991); the teacher listening carefully, respecting children's ideas and accepting that they could differ from her own; the teacher accepting that she might also fail or make mistakes and being accountable to the children; the teacher transferring responsibility for assessment, behaviour management, teaching; and managing whole-group activities; the teacher restraining from making personal judgements and adopting a more neutral stance.

The interplay between the individual and the group

The sociocentric approach of the MEM model considers that the community where children learn should provide the means for individual contributions towards joint enterprises, promoting a sense of belonging, and emphasising both personal agency and individual and social responsibility. Negotiation takes a central role as individual free wills and ideas have to be accounted in group decisions, rules and shared priorities. The group has a central role and whole-group activities are central to community building.

The piloting tools were constructed as group tools with space for individual voices ('Diary'), plans and evaluations ('Diary' and 'Activities Chart') and individual responsibility within the group ('Responsibilities Chart') thus allowing the piloting of both individual learning and group achievements and difficulties.

Analyses in both classrooms found that an individual's work and knowledge were not seen as individual property. Children were invited to contribute to each other's work, and copying each other was seen as a legitimate way of learning. Communicating each other's learning experiences fostered the sharing of knowledge and the extension of individual learning through others' comments and evaluations. Collaboration and peer-tutoring between children was constantly encouraged.

The interplay between individuals and the group in a community relates to the way in which the community's social fabric is woven. The analysis of children's collaboration versus disputes or competing behaviours showed that this process required a laborious undertaking for the teacher; and also how the rub is in the small subtle communication features, rather than in the mere organisation of collaborative activities. The teacher's constant care to involve the group in the discussions of a given child's matters, interests or experiences, contributed to the progressive interest and involvement in each other's matters, as well as to the building up of a group ethos where there was a shared concern for each individual. The way in which problems were discussed without personal judgements may also have helped the children to build up positive relationships. The interactions with the children, constructively building from their ideas rather than offering contra assertions or rejections may have modelled more collaborative types of talk in group situations. Finally, at the same time that the focus was centred on devising common goals, commitments and rules, there was also respect for individual ideas and different points of view and decisions.

9.2. The MEM model for ECE pedagogy and children's learning to learn

In answering the second question of the study, three components of learning to learn have been explored: metalearning (Watkins, 2001), appropriation of different literacies through semiotic activity (van Oers, 1999a; Wells, 1999) and resilience (Dweck, 2000; Claxton, 2002).

Metalearning

Combining action with reflection (chapter 3) is an important process in supporting children's consciousness about their learning (making it visible and an object of reflection) and empowering them in taking progressive control over it (self-regulation).

One of the critical features of the MEM model is that the children share some of the roles often attributed to teachers such as planning, assessment and teaching. This characteristic of communities of learning promotes shared metacognition (Watkins, 2005a) as children gain progressive control and learn to manage their learning in cooperation with others particularly at Council Meetings, in collaborative projects and at Communication Time.

In this study, through participation in planning and evaluation at Council Meetings, the children learned to move from 'just choosing what to do' into thoughtful planning in accordance with goals, taking into account the context for realization (when, where, with whom, how). At the same time they learned to reflect on what they had already done and to apply those reflections in designing new negotiated plans. The structure of the meetings and the 'Diary' promoted a continuous cycle of evaluating to planning and back to evaluation. The children's ability to engage in devising thoughtful plans in Council Meetings was related to the teachers' ability to provide adequate challenges and to support them. Posing challenging questions and expecting children to make rational decisions through negotiation required careful scaffolding by the teacher so that children did not have a sense of failure. This support was particularly efficient when the teacher understood and respected the children's line of thought and their difficulties, and was able to engage in 'sustained shared thinking'. The ability to involve the group in thinking together, co-constructing ideas, plans and decisions, promoted the use of

cumulative and exploratory types of talk as opposed to disputational (Mercer, 2000). According to Mercer, in such types of discussions, talk has to centre on ideas and not on 'being right' or 'getting it right'.

Children also used the Activities Chart as a self-regulative tool on different levels: reflecting on their choices, planning (anticipating) their activities, monitoring plans, and progressively engaging in purposeful planning through the appropriation of explicit learning oriented criteria based on assessment. Linking assessment with planning is an essential feature of formative assessment and more specifically assessment for learning (James et al., 2006). The assessments for learning processes occurring during the use of the Activities Chart were centred on activities ("what do I need to do or choose") rather than learning content ("what do I need to learn") or processes. However, supported by a clear planning criteria (Amoreira) some children understood 'doing different activities' as a way to learn: *'Mr (5:10) (we choose different activities) so that we can learn to do all these things*', meaning that they began to understand learning and the process of knowing as something that arises from intentional action, which according to Pramling is already a sophisticated view of learning (1996:571).

The study identified particular mediating factors in the potential of the Activities Chart as a self-regulative 'piloting tool'. First, the design of the activities chart – having two separate charts did not promote links between evaluation and planning. Secondly, using the AC along with children's activities during Activities & Project time, supporting the links between planning and assessment. Separating plans and assessment in time did not promote links between these two actions. Thirdly, the teachers' understanding of the Activities Chart as a tool for formative assessment. If the teacher does not value such potential, the children do not use it for designing learning oriented plans. Fourthly, the consistent use of explicit planning criteria; the content of these criteria was also important to mediate the type of learning processes being promoted. Finally, the evaluation of the AC with the group of children, so that reflection about what they have been doing (individually or as a group) turns into improvements.

Another component of the MEM ECE pedagogy that promoted metalearning was the use of the project framework to structure the children's goal-oriented activities. This framework promoted engagement in reflection about 'What do we want to do/know?' 'What do we already have/know?' 'How can we do /find out what we want?' 'Who is going to do it and when?', 'What have we done and how?', and was embedded in many

of the interactions between the teachers and the children during Activities & Projects, Council Meetings and Communication Time. Using this structure as a metalearning framework promoted the children's intellectual and social participation in devising goal-oriented activities, their engagement in self-regulation, seeing themselves as self-directed workers, authors and inquirers.

As seen in chapter 7, the opportunities children had to record or document their experiences promoted a consciousness of their experiences and reflection on the link between goals, processes and products through self-appraisal and self-management monitoring statements. This was accomplished independently or in interactions with the teachers and peers. Through 'documentation', children's learning became visible and the object of joint reflection, revisiting and extending the learning processes (Rinaldi, 2001).

At Communication Time the children had an opportunity to present, explain, discuss and assess each other's products and processes, making learning visible as an object of reflection. The interactions between the teachers and the children helped them to share and understand varied aspects of learning experiences (goals, actions, strategies, rationales, results and learning and assessment criteria (see Appendices 19 and 20). The engagement of the whole group in commenting, questioning, assessing and extending each other's work, and sharing points of view, promoted the use of self-appraisal metacognitive thinking (processes, strategies and difficulties), joint reflection on how to improve and individual and shared responsibility. The children's participation in peer-assessment and extension of each other's learning provided opportunities for learning criteria to be shared and appropriated. For this to happen, the teacher's understanding of Communication Time as an assessment for learning activity going beyond children showing and explaining to others what they did and how, to be a joint celebration of learning, was crucial. The analysis of data showed that for its interactive potential to be fully explored each Communication Time session could not include too many presentations.

As pointed out in the literature review, children's development of metacognition is related to their development of language and theory of mind (Astington and Pelletier, 1996; Bruner, 1996) which can be promoted by their experience of interaction with adults who model a 'mentalistic language' (Astington and Pelletier, 1996). The analysis of interactions (chapters 6, 7 and 8) showed that both teachers invited children to think

by using a considerable amount of open questions; they encouraged the sharing of ideas and promoted problem solving strategies. Most of the thinking dialogues were related to the regulation of learning, providing rationales for choices, ideas and evaluations. Some conversations invited children to engage in other thinking modes such as moral reasoning, talking about feelings, and making conjectures. These were particularly present when children had time to engage in joint dialogues, when the discussion of ideas and points of views between children was promoted by teachers, and also when they engaged in talk about open-ended issues. The need for teachers to model more sophisticated mentalistic language going beyond general states of mind (such as sad, happy, thinking well or carefully), was also highlighted.

This study showed that particular components of the MEM ECE pedagogy promoted metalearning processes: children participating in planning and evaluation, the use of a 'project conduct', the use of records to represent and document learning, and Communication Time. It was also revealed that these actions and social practices, the piloting tools and the dialogues between children and the teachers, made a joint contribution in promoting metalearning processes that should be considered in relation to each other.

Participatory appropriation of different literacies

The MEM ECE pedagogy offered a framework (organisation of time, space and materials) where young children had the opportunity to engage with practices and tools from different areas (art, maths, science, music, drama, reading and writing, technology, food culture, dance and gym), promoting a participatory appropriation of different literacies. The general emphasis on communication centres on the process of making meaning through dialogue offering many opportunities for children to engage in semiotic activity. When Carolina said that talking about what the children had done was "calling things by their names" (Carolina #1) she was referring to the "semiotic practices – the ways of making meaning – that are valued in the culture" (Wells, 1999:242); and to the progressive change she wanted children to make, moving from the informal exploratory play into emergent literacies practices, concepts and specific tools. The work of van Oers has been quoted to illuminate how this change was promoted in MEM classrooms.

Meaningful activities in different areas of the classroom and project work offered opportunities for children to produce different cultural oeuvres integrating different semiotic tools (drawings, letters and writing, expressive gestures, numbers, graphs, tables, arrows). At the same time children were displaying signs of being involved in "authentic learning" such as volunteer involvement, persistence, and agency (van Oers, 1999a).

The records/documentation and the piloting tools were also compiled using drawing, writing, ordinal and cardinal numbers, tables and other conventional symbols such as arrows and colours, thus using semiotic tools from different literacies (van Oers, 1999a). Recording what the children had done helped in some cases to transform an exploratory/play activity into a learning activity (for example: C playing with magnets in the Lab at Amoreira; children playing with language at Magnólia).

Communication Time was also an important forum for introducing semiotic activity in the classroom. Through presentations and discussions during this period children were linking signs with meanings and clarifying and engaging with specific language (such as attracts or maths). As they talked about processes, they were also appropriating practices particularly relevant to the production of different 'oeuvres' (for instance, systematic observation/question, classification, counting and comparing in a survey about lost teeth). It was not in the scope of this study to do a systematic evaluation of children's appropriation of each curriculum area. Yet, it became evident in both classrooms that there was impressive learning of language and writing and young children's emergent literacy in this domain, as well as in the area of art (particularly in Magnólia). Many of the vignettes in chapters 6, 7, and 8, provide evidence of the use of mathematical thinking and tools (numbers, counting, classification) or ICT emergent literacy.

This study was able to point out some aspects that might have dynamically impacted on the children's appropriation of different literacies through engagement in meaningful activities within each area, enriching children's language, content knowledge, attitudes and mastery of processes. For example: the areas individual teachers valued most (language and writing for both teachers; arts for Patrícia, and science for Carolina) and their knowledge of both content and processes; the teachers' confidence in engaging in different thinking genres (for Patrícia, production and inquiry; for Carolina, discussion, argumentation and production); the teachers' active engagement in the different areas of

the classroom and consistent provision of the different activities (i.e. cooking, stories); and lastly the choice of children's work to be presented at Communication Time. All had a bearing in children's learning in both classrooms.

Resilience

This study looked at resilience as a learning disposition at the core of effective learning (Claxton, 1999; Dweck, 2000). As pointed out in chapter 3, a key trait of resilient learners is their orientation to learning (Dweck, 2000). Resilient students are the ones who find the appropriate resources or help (in themselves and /or in their environment) to carry out learning – resourcefulness (Claxton, 2002).

Investigating how children in each classroom constructed their learning identities and set their learning orientation presented a complex picture, particularly as it was necessary to identify the components of the MEM practice that promote resilience, and the ones that, particularly at the interactive level, discourage children. Very young children were observed learning to face problems and criticism, using it as a way to improve, while other children displayed helpless attitudes and lack of belief in their own ability to overcome problems, and others were overly concerned with getting it right (performance-orientated) instead of focusing on the processes (learning-oriented).

Key elements of the MEM pedagogy were associated with environments that promote resilience. First, creating classroom communities where children feel valued and supported in taking risks and stretching their learning power. Second, focusing on education and learning through working or engaging in inquiry and productions (rather than entertaining activities or care), providing an enphasis on effort and motivation to produce, learn and overcome problems together. The curriculum based on the children's interests and experiences provided a meaningful context where effort was bound up with motivation; Third, engaging children in decision making and negotiating their learning paths promoted both agency and responsibility, which are important components of an environment, which promote resilience (Claxton, 1999; Carr, 2001a).

The focus on products rather than processes has been identified as promoting children's performance oriented attitudes towards learning (Claxton, 1999). As seen in both classrooms, there were plenty opportunities for talking and discussing the relationship between products and processes. In Communication Time where children's products were presented, children learned about the processes (actions, use of material and

human resources, intentions, purposes, problems) involved in reaching the final product (goal) instead of proceeding to the evaluation of a product as the sole outcome of 'getting it right'. Talk about processes was also part of many teaching episodes during Activities & Projects time. These sustained dialogues, which sometimes involved extending or developing the product further, were important sources of knowledge about how to stretch learning for the group. Yet, there were situations when the focus on products overcame the attention on processes: in the Amoreira classroom, Carolina especially praised the 'amount' of work in different areas of the classroom, and in the Magnólia classroom the high standards of aesthetic and intellectual quality of the 'oeuvres' became the main goal for Patrícia.

Research has revealed how a clear understanding and negotiation of rules and a common set of social norms promotes resilience in students (Henderson and Milstein, 1996; Watkins, 2005b). In MEM classrooms these norms and rules are publicly shared and constructed with the children, particularly during Council Meetings, constituting a secure environment where children learn what to expect and what others expect from them. This study showed that discussions about rules should not be used as a means to judge the children's personal worth (being good or being a friend) but should concentrate on why certain behaviour are manifested and offer a supportive forum in which ways of improving could be identified. Such distinction is crucial in preventing children's performance attitudes and helpless behaviours (Claxton, 1999; Dweck, 2000).

Another key factor in promoting resilience was the way in which problems were dealt with in the classroom. At Amoreira, the problems children encountered or that the teacher pointed out, constituted opportunities for learning with the support of the teacher and the group. The Council Meeting discussion of children's problems, the use of the Activities Chart for learning oriented planning, and the Communication Time assessment of children's work, helped children throughout the year to learn to solve problems together and to take on challenges. The teacher understood the role of assessment as promoting learning '*we criticise to improve*' and the children saw the CM as the forum '*to solve problems*'. Problems were explored through different perspectives such as intentions, lack of resources, quality of support, attention, effort, which the children came to understand and jointly tried to overcome. At Magnólia, problems were sometimes seen as signs of misbehaviour, lack of friendship, or lack of ability to think, and little attention and time was given to scaffold children in overcoming their

difficulties. Restating rules and pointing out failures (of behaviours, of thinking) did not support children's problem solving. Beyond the general ethos of the classroom and the way the group deals with problems, it is particularly important that teachers attend to individual children and are committed to share with and work on a child's difficulties, thus supporting him/her to find appropriate strategies to overcome his/her problems.

The teachers' use of questions and feedback are referred to in the literature as important pedagogic tools for assessment for learning (James et al., 2006). This study revealed that the use of questions sometimes led to a child's sense of failure and performance attitudes. This happened when the questions were too challenging and beyond the child's understanding. On these occasions the children felt inadequate and lacking in intellectual ability, as their answers did not receive positive feedback. When the teacher asked seemingly open questions but had a particular answer in mind, the children were trying to guess what the teacher wanted (rather than thinking freely) and adopted performance attitudes trying to get it right.

The feedback both teachers used in their interactions with the children was mainly task-related, and descriptive, offering children tools for improvement. In the Magnólia classroom, the occasional use of personal oriented feedback and evaluative judgments centred on the children's personal traits (laziness, children's ability or willingness to think, to cooperate or to be kind to others), seemed to damage some children's self-confidence as learners and colleagues, as well as leading to the display of helpless attitudes.

One particular feature of the feedback was the teacher's tone of voice and volume. Carolina adopted a more neutral tone when giving criticism or praise. Patrícia used a louder voice and more judgemental tone and, at times, this led to her task-related feedback being received by the children as personal criticism leading some children to seek her approval or acceptance, and to fear that she would not accept their work. This occurred particularly when children misbehaved and when they failed to respond to the high standards that were set for the quality of the products or thinking.

This study results would suggest that the organizational structure of the MEM was not enough to ensure that children built up epistemic identities that would empower them for learning. The way in which the teachers and the children used the piloting tools, the structure, content and affective tone of the interactions carried out during different

activities were seen to have a tremendous impact on the realisation of a true enabling community of learning. The focus must be moved away from encouraging the children to simply 'be good' or show special skills or intelligence, and be directed towards processes for improving, and solving problems in a challenging but supportive environment. Teaching approaches, the quality of feedback and the questions and the way in which the teachers involved the children when interacting with each other and promoting their participation are all key factors in building up a community of learning.

9.3. Understanding classroom practices beyond the classroom community

Having shown how the MEM classroom practices were constructed through the participants' day-to-day creation of meanings, and specifically how classroom circumstances, the way teachers understood and implemented the MEM model and their interactions with the children impacted on the meanings that were generated in the two study communities, it is time to observe how these practices were related with the structural and institutional characteristics, with the MEM model for ECE, as well as with the MEM system of cooperative teacher development. These factors do not operate in isolation in classroom practices but are mutually constituted.

9.3.1. Structural and Institutional factors

The MEM ECE practices of the two communities analysed in this study were supported and constrained by some structural and dynamic factors: 1) the size of the group; 2) the resources – space and materials (quality and quantity); 3) the consistent and predictable organization of time (either bound to institutional rules or more flexible to the group's needs); 4) diversity and stability of the staff (sharing common knowledge; promoting/ constraining continuity); 5) the age span of the children in the institution (0-6 or 3-6); 6) the institutions' ways of doing things (reified practices and culture); 7) the institutional ethos; 8) the staff development systems.

The *size of the group* may have impacted on the way whole-group language based activities were carried out in both classrooms. While at Amoreira these activities included 15 children at the most, at Magnólia they frequently included up to 22. The difficulty of promoting sustained shared thinking with a large group of young children has been identified by Siraj-Blatchford (Siraj-Blatchford et al., 2002). Studies providing

evidence of pre-school whole-group interactive activities where children's participation is meaningful and inclusive, with children sharing power over the interactions with the group and the teacher, typically include no more than 16-20 children (Hong and Walsh, 1996; Poveda, 2001; Vasconcelos and Walsh, 2001).

The two institutional contexts where the MEM practices were investigated differed greatly in terms of the *strength of the school culture*. Wenger points out that "the local coherence of a community of practice can be both a strength and a weakness. The indigenous production of practice makes communities of practice the locus of creative achievements and the locus of inbred failures" (1998:85).

The contradictions found at the Magnólia classroom were unexpected given that its school exhibited characteristics usually associated with an effective setting: strong leadership and relatively little staff turnover; the setting viewed educational and social development as complementary; a trained teacher acted as manager and a good proportion of the staff were qualified (Siraj-Blatchford et al., 2002; 2003). The Magnólia classroom was, in fact, integrated into a strong school culture devoted to quality education with a cohesive, stable and diverse team, excellent space and materials, and was an institution to which Patrícia was proud to belong. In-service training and teamwork provided focus on quality and a constant evaluation of practices which promoted practices with high standards of quality in many aspects (project work, inquiry, aesthetic quality, meaningful learning experiences). However, the study revealed that this strong institutional culture might have limited Patrícia's agency in adopting practices other than the ones legitimated within the teams of the various crèches. Edwards' (2004b) account of how institutions create ZPD for teachers' change in practice, shows that these are constructed by institutional practices and the teachers' perceptions of their possibilities for actions within these.

The in-service training and constant sharing of practices based on the evaluation of the products (piloting tools, documentation), may have had two implications. First, the teachers put time and effort into the productions of these products in detriment to paying attention to the sustained interactions with all the children, including the ones not involved in projects. Secondly, their analysis of the products may have prevented them from identifying and discussing the problems arising in the classroom.

Wishing to respond to the high standards for products and practices promoted by her institution's in-service training, Patrícia displayed on some occasions performance-oriented attitudes towards learning rather than a learning orientation. Watkins points out that when feedback is focused on judgements of teachers' performance in the classroom teachers tend to show performance oriented attitudes, helplessness and defensiveness towards the improvement of their practices (Watkins, 2000).

Some characteristics related to this aspect of the in-service training, were similar to some of the processes occurring in Patricia's classroom: judgement rather than joint problem solving; high expectations on products and thinking and poor acceptance of problems and failures; some children displaying helpless attitudes and competitive behaviours. This study raises the question about how the leadership ethos and processes might impact on teachers' practices with children in the classroom. Siraj-Blatchford and Manni's research has identified a range of effective leadership characteristics, and most of them were observed within the Magnólia crèche and to a certain extent at the institution level under the direction of the DED. However, as the authors point out "Effective leaders are therefore reflective practitioners who influence and develop people by setting an example, and providing a model, both morally and purposeful (2006:22). The significance of such modelling processes between the way in which the teachers learn and the way they set up learning environments for children is an important principle of the MEM movement called "pedagogic isomorphism". Part of the MEM culture is "the development of democratic educational practices (in the classroom) isomorphic of the ones used in co-operative self-development – *auto-formação cooperada* (between MEM teachers)" (González, 2002:43).

9.3.2. The MEM pedagogical model for pre-school

The MEM model for ECE proposes a comprehensive, coherent and ambitious pedagogy. This study identified some of the difficulties both of the teachers faced in putting into practice this 'ideal' model. Some of these difficulties were, in part, found in areas where the pedagogy of the MEM ECE model in itself is not sufficiently clear:

- How to conduct whole-group interactive activities such as Council Meetings and Communication Time with children from 3 to 6 years.
- The role of 'play' within the MEM ECE model; how to integrate play in a 'cooperative reconstruction of culture' view of learning.

- How to use some of the piloting tools in the classroom.

Both teachers in this study were highly skilled in putting into practice some of these components, making use of their knowledge about children and ECE and the MEM philosophical principles. The conceptualisation of these practices is an important contribution to clarify and extend the MEM pedagogy. In the same way, some reinterpretations, which were seen to lack coherence with the MEM principles, may constitute a good basis for reflection and further conceptualisation.

The lack of any explicit teacher education texts specifically focusing on how Council Meetings and Communication Time should be put into practice with young children may be hindering the quality and success of these activities. The results of this study may contribute towards the elaboration of such texts. The same applies to some piloting tools, which seek clearer directions in terms of configuration and particularly in terms of the procedures and criteria for their use.

The MEM model for ECE is particularly strong in the area of language, literacy and in its initial approach to writing (Artur, 2000). Niza considers this as a fundamental learning area, with implications for other areas of learning, "the roots of the knowledge tree" (Peças, 2005:56). The emphasis on communication as the means through which learning takes place is especially important. Other areas of the curriculum are not as developed, particularly in defining the processes through which children learn different literacies in a meaningful way. Mathematics was embedded in many different activities in the classrooms, but the 'Maths area' did not have a functional purpose as was the case for the 'Library' or the 'Office'. The function of the 'Home corner' within the MEM model was not clearly defined, failing to provide a cultural learning project for this area.

The need to understand the role of play within this approach extends to other areas of the classroom where young children's main activity might be play. Stating the importance of children having time to play (third condition of MEM ECE, see chapter 2), was not enough to clarify the MEM view of the role of play in children's learning. A question still remains: what is the role of an adult engaging with children's play in order to promote a link to practices associated with different literacies, thus supporting a transformation from play to learning. This study suggests some avenues for exploring further this problem, both by referring to van Oers work and by using the observations

made during this study suggesting, as best practices: 1) to promote that children record their play activities; 2) to bring play activities to be talked about and discussed during Communication Time; 3) to engage in children's play extending it and promoting its complexity (Sylva, Roy and Painter, 1980). Understanding the role of play in MEM preschool classrooms is of paramount importance, as this study has shown, particularly in relation to the youngest children who might otherwise be left on the periphery of the community's shared endeavour.

9.3.4. The MEM movement continuing development programme

The MEM movement as a community of practice centred on the development of teachers and their practices, through cooperative self-development – *auto-formação cooperada* is seen by academics as unique in its capacity to produce innovative teachers' development and classroom practices (Estrela, 1992; Formosinho, 1996; Nóvoa, 1996). Most processes of this community involve teachers talking, sharing, studying together and communicating their practices to colleagues for critical evaluation and development (González, 2002). The MEM movement as a community of practice has been impressive in producing a 'shared repertoire of communal resources' (Wenger, 1998:73), which has supported many teachers in their theoretical/practical learning and in producing and applying a coherent pedagogical model.

This study of two well regarded and fully participating MEM ECE teachers showed that the contradictions found in their practices were mainly located at the process (actions and interactions) level. Sharing of accounts of practices and analysis of products while an important source of information had not helped them to identify the underlying processes occurring in their classrooms. The focus on products as a base for analysing practices might have hindered the teachers' focus on improving the processes generated in the classroom.

9.4. Reflections on the study

This study investigated two practices of the MEM ECE model in depth, focusing on different planes (individual, interpersonal and community/institutional planes) (Rogoff, 1998:688), using a combination of theoretical lenses to look at several components of classroom practices. In this way this study investigated pedagogy in an integrative way (Watkins and Mortimore, 1999), and avoid fragmentation (Alexander, 2000). Looking

at the school context, the classroom structural organisation, and the dynamic creation of meaning mediated by the MEM model in two classrooms, the study was able to provide a comprehensive account of the MEM pedagogy and learning in the early years.

The illustrations of the MEM model in practice added to the understanding that within the same ECE model there is scope for diversity, reinterpretation, and contextualisation, avoiding sterile practices which aim at reproducing a pre-defined 'ideal' model. Meaning is created in negotiation processes occurring as people act and interact through shared practices including participation and reification (Wenger, 1998). At the same time these two illustrations permitted the identification of some limits for reinterpretation, beyond which coherence between practice and the MEM aims is lost.

The combination of socio-cultural theoretical concepts and the processes associated with learning to learn allowed extending the scope of the inquiry from children's participation in classroom communities of practice into children's participation in communities of learning, which was identified as promoting processes associated with learning to learn. Such a focus fostered the understanding of the contribution of the MEM model to a crucial aim of education in the 21st century. The focus on the organisation of social practices, the tools used, and the interactions occurring in the classrooms, permitted the analysis of the creation of meanings within these two communities. The in-depth analysis of the interactions was particularly useful in unveiling some contradictions between the MEM 'ideal' model aims and the meanings created in these two practices (for example in power relationships).

The triangulation of data used was also particularly useful in illuminating practice, increasing the validity of the research findings by including the participant's views, the research's long-term observations in the field and the in-depth analysis of some key features of the model. The contribution of children's views of some of the model's components were crucial in fully understanding the cultures of learning that were being generated in each classroom.

This study aimed at providing evidence for change in participation in processes associated with children's' learning to learn. This was achieved through a careful plan of data collection that included observations focused on children from all age groups, and also, in-depth analysis of interactions across the year. In regard to the children's view of how one learns and what is the purpose of coming to school, the study would

have benefited from data collected both at the beginning and at the end of the year, to show more clearly any change in participation. As for the data collected on individual children throughout the year, it may be used in future research that looks at the individual paths of 'change in participation' and understanding how the MEM pedagogy in these classrooms mediated individual paths of learning, and was able to respond (or not) to individual needs.

This study dealt with the children's appropriation of different literacies in a general way. While some evidence of children's change in participation in some areas of knowledge were illustrated (socio-emotional; literacy), in order to further understand the opportunities the MEM model offers for children's learning, further research should be done focusing on change in participation within specific literacies (i.e. maths; science). This would help to understand to what extent the MEM ECE model needs to develop further particular areas of the curriculum.

Carrying out this study was both an engaging and at times a painful journey. In spite of my involvement with the MEM, I became part of both classrooms and schools. It was not easy, thus, to use a systematic and rigorous approach to analyze the every-day processes in these two communities. The results of this study have been discussed with both teachers, who demonstrated their commitment to the quality of early education "If I accepted you in my classroom, it was because I truly believe in the role of research to improve practice" (conversation with Patrícia, 2007). Carolina was equally generous and committed, she stated "we criticise to improve" both comments encourage further dissemination of this study.

9.5. Implications of the study

For the MEM movement and for the pedagogical model for ECE

This study suggests that the MEM movement should pay attention to the processes of meaning making through inter-actions occurring in the classrooms, complementing the discussion and analysis of practices with direct observations of classroom practices, videos or audio. The analysis of practices should be concerned with the organisation of the learning process, but also with the communication that is produced both at the content level and at the relational level. Action research projects, joining together academics, MEM retired experienced teachers and teachers in practice, could contribute

further to the development of coherent practices and professional development in co-operation. This study also identified a few themes that could be considered for reflection, research and improvement:

- The role of play in preschool MEM classrooms.
- The role of the adult in a democratic community of pre-school children, in particular related to: teaching role, power and communication with children.
- Group size in whole-group activities: Portuguese classrooms often accommodate up to 25 children, and an adult helper is not always available.
- Clear indications (structure and content) for conducting whole classroom activities using dialogical interaction.
- Discuss further the formative assessment practices and the piloting tools used in different situations of the MEM routine (CM, CT, A&P).
- Produce knowledge on learning and pedagogy in different areas of the curriculum, namely maths, arts, and science.

For pedagogy and learning in the early years

This study contributed to knowledge about ECE pedagogy and learning in several ways:

- The MEM pedagogy supports the view of young children as citizens of democratic societies in line with international contemporary trends on ECE (Pramling, Sheridan and Williams, 2004). This study contributed to the understanding of how young children can act as citizens having a voice, social responsibility and being active participants in decision-making. It also contributed to the understanding of the role of the teacher in sharing power and responsibility with very young children.
- This study contributed to the understanding of how ECE classrooms promote the transformation of children's leading activity from play to learning, valuing the educational role of preschool years and its contribution to empower children as learners: taking ECE classrooms for communities of learning may further contribute to this process.
- This study contributed to the understanding of pedagogical situations which promote young children's metalearning. It provided evidence about the

importance of interactions between teacher and children, as well as between peers in collaborative activities and joint conversations, fostering children's display of metacognitive thinking;

- The importance of formative assessment in promoting children's metalearning, and empowering students as self-reliant learners, has been demonstrated through studies mainly concerning the primary school years. This study provided evidence on how young children can start to direct their learning plans and take responsibility in responding to their problems through participation in planning and assessment during Council Meetings, Communication Time, and Projects, using particular tools such as the 'Activities Chart', the 'Diary' and the project structure.

- This study contributed to the discussion about the role of whole group interactions in communities of learners, by sharing goals, discussing, understanding of different points of views and sharing responsibility for learning. It raised awareness of the conditions needed for ensuring participation and joint construction of meanings in whole-group situations;

- This study points out that the investigation of how pedagogical models contribute to children's effective learning requires more research to look both at the reified components of pedagogy and the participatory processes which complement each other in creating meanings (Wenger, 1998), particularly the interactions between teachers and children. Following other studies on young children's learning it provided evidence about the need for teachers to combine a concern with the cognitive structure of their teaching interactions and activities, with the socio-affective involvement of all children.

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Appendices

Appendix 1 Researcher's professional biography

I was trained as a nursery teacher and worked in pre-schools for twelve years, both in IPSS nurseries and in a private nursery, which I helped to launch. After completing my Master's degree in Child Development and Early Childhood Education in London, I became a university lecturer involved in teachers' training and research in Early Childhood Education mainly at the University of Évora.

As a nursery teacher I had some contacts with MEM teachers (see professional stories below), but I never applied the model myself. These contacts though, were crucial sources of conflict, which made me reconsider my profession.

During my Master's course (13 years ago) I became interested in the influence of Vygotsky on MEM pedagogy (Folque, 1998) and after completing my Masters I started to participate in some MEM cooperative groups and initiation training for nursery teachers. The constant search for theoretically and ethically coherent practices in cooperation was something I found particularly interesting about this teacher's movement. "Pedagogy is a moral science. It requires congruence between means and ends" (Niza, 1998). Participation in the MEM movement led me to challenge and reconstruct my views about children, how they learn, the teacher's role in this process and also to reconstruct my views of children as members of a democratic society. Reconstructing understandings about ECE pedagogy has been an engaging and demanding process in searching the links between theory, values, culture and the professional practices, taking on board the challenges of the world in the 21st century.

In my role as a researcher I pursue my interest with the MEM pedagogy and particularly in understanding how this challenging model operates in practice with very young children.

Two professional stories

One day a senior colleague (MEM member) visited me at my workplace in the context of a joint project. I was showing her my classroom and explaining the ongoing project on Space shuttles which included building one in the playground. As children wanted to know many things about this subject... I proposed they would write to NASA posing some of their questions. The letter was displayed in the classroom and she asked if NASA had answered the letter. I laughed and said, "No! This is a pretend letter... I did not send it!" She looked at me with an expression of puzzlement and asked me if I deceived the children. I told her that I pretended to write a letter on behalf of NASA. She returned, " You misled your children. You did not respect them...." This was a strong comment, which made me question the way I worked with children, related to them and viewed them...

I phoned Marta, a MEM nursery teacher to ask her advise on how to set up a 'primary school' corner to support children in transition in my classroom. I knew they had a corner in the classroom where children used to write, so after explaining my concerns I asked if she could give some advise on how to set up a pretend primary school (where children go to learn how to read and write). She replied, "I don't think you understand, we don't have a school corner where children pretend to write! We have an office where children do write!"

Key challenges:

- Keeping children in a world of their own or supporting their engagement with the world, through real participation.
- "Make them equals so that they can truly be equals" (Rousseau, 1762).

Appendix 2 Early Childhood Education in Portugal

Pre-school education in Portugal is considered the first stage of basic education and accommodates children between 3 and 6 years old. Although not compulsory, since 1996 the state has tried to provide a place for all children whose parents want one. 78,4% of 3 to 6 years old children attended Pre-school education 2005/2006.

Pre-school settings

Pre-school education in Portugal is provided by different settings – *jardins de infância* - belonging both to the state sector and the private sector.

State sector

Nursery-schools are run by local authorities and are funded by the Ministry of Education (ME). They are generally attached to a primary school. In rural areas they usually have one classroom and are quite isolated from other education establishments. They are free and parents only pay for after-school (5+ hours) schemes in accordance with their own economical resources. Enrolment priority is given to older children. These settings accommodate 51% of children in pre-school(Ministério Educação, 2007)

.

Day-centres are Ministry of Work and Social Solidarity (MWSS) state centres for children from 0 to 6 years old with after-school activities for primary school children. Parents pay in accordance with their own economical resources. They are open up to 10 hours a day, 11 months a year. They give priority to children "in need" (working parents, "at risk" children). They accommodate 1,4% of children in pre-school (Op cit).

Itinerant education depends on the Ministry of Education (ME) and operates in rural areas with a sparse population and children are visited by a nursery teacher several hours a week, they engage in educational activities in their own homes.

Private sector

Instituições Particulares de Solidariedade Social (IPSS) day-centres are private charities (non-profit) usually linked with local social associations or with the Church. Generally integrated with a "crèche" for babies and toddlers and also with after-school

activities for children in primary schools. Priority is given to children of working parents or to children considered at risk. They open long hours (10+ hours) all year round. Parents pay according to their economic resources. They accommodate approximately 30,6 % of children in pre-school (op cit)

Private, for-profit nursery-schools are sometimes associated with private "crèches" in urban and suburban areas or with private schools with all levels of education. Parents pay fees but can apply for subsidy (according to their own income) from the ME. Open for 8 to 10 hours a day and eleven months a year (with some variations). They accommodate about 17% of children in pre-school (op cit).

Children with special needs are integrated into pre-school classrooms and the teacher receives the support of a specialised nursery teacher according to the needs of the children.

General principle and objectives of pre-school education

The Pre-school Education Law (1997) establishes as a general principle that:

> *"Pre-school education is the first step in basic education in a life-long educational process. It is complementary to family education, acting in close partnership in order to provide a balanced development of the child with a view to his/her full integration in society as an autonomous, free and co-operative individual."(Ministério da Educação, 1997: 15)*

This general principle highlights the educational aim of promoting individual development or learning, but also, social development as a citizen. This idea is reinforced in the first of the nine pedagogic objectives defined in the same document:

> *a) To promote the child's personal and social development based on democratic life experiences within a perspective of education for citizenship.*
>
> *b) To foster the child's integration in different social groups, teaching respect for different cultures and encouraging a growing awareness of his/her role as a member of society.*
>
> *c) To contribute to equality of opportunity in access to education and learning success.*
>
> *d) To stimulate each child's overall development with respect for individual differences, inculcating patterns of behaviour favourable to significant and diversified learning.*

e) To develop expression and communication throughout multiple languages as means of relating, of informing, raising aesthetic awareness and understanding of the world.

f) To arouse curiosity and critical thinking.

g) To ensure each child's welfare and safety, especially in terms of individual and collective health.

h) To correct precocious, deficient or socially unacceptable behaviour, promoting the best guidance to the child.

i) To encourage families' participation in the educational process and establish effective co-operation with the community."(Ministério da Educação, 1997: 16)

Historical trends in Portuguese ECE

One century of dualities and conflicting views

Early Childhood services for young children in Portugal go back to the 16th Century but it is in the 19th Century that they begin to have a real existence. In the 19th Century some services emerged for the protection of abandoned children, and the ideas of emerging European pedagogues had an immediate impact on the early developments of early childhood education and care. The first *"jardim de infância"* was inaugurated in 1882 by the municipality of Lisbon in a public garden. It had a Fröbelian orientation and workers received training in Germany. In 1910, with the fall of the monarchy new liberal republican ideas saw education as a means for liberation and equality and the first state system of pre-school education was launched implementing a curriculum based on play but with early reading and writing activities too. During this period some private schools inspired by the poet João de Deus opened. They also had a curriculum based on Fröbel's ideas and introduced a method of reading/writing called "cartilha maternal". Despite political plans to launch schools for young children combining care and education, very few places were created during this period and with the change of political regime in 1926 pre-school education was not seen as a priority (Cardona, 1997). Women were encouraged to stay at home to look after the family. From the 1940s to 1960s the need for women's labour also created the need for services for young children but they were developed under the ministries of Social Affairs and Health. At the same time private nursery schools, usually integrated into private

schools, were launched with educational goals that were meant to prepare young children for school. These nurseries were licensed by the Ministry of Education.

During this period some private teacher training colleges emerged: the João de Deus School (1940s), two other schools in Lisbon (1950s), and later also in Coimbra and Oporto (1960s). Those schools based their training on Christian and humanistic values and introduced Montessori and Dècroly's methods into Portuguese ECE pedagogy. If João de Deus' schools were based on the early pedagogies of the beginning of the century, the new training colleges were responsible for the progressive pedagogical innovation in those years (Vasconcelos, 2005).

Nursery teachers were trained to work in different services like day-care centres, residential homes for children, hospitals, or in private schools, adopting a holistic view of the child and aiming toward their full and integral development. The Ministry of Education had no involvement in ECE at that time except through licensing private schools.

After the 1974 revolution there was a popular movement which resulted in services for young children and those involved demanded the creation of a state pre-school sector which was created in 1977 (Cardona, 1997). The state sector of pre-school education was only concerned with education and was organised to run only for 5 hours a day, generally annexed to a primary school. It developed mainly in rural areas and was free. Because of its focus on education, without accommodating the needs of families, this system was not suitable for urban areas and so the day-centres dependent on the Ministry of Social Affairs continued to prevail. Nursery teachers' training was and still is the same inspite of the sector in which they are to work. In the ME system, teachers work less hours and are better paid; they also have more opportunities for training, this of course is very similar to patterns in other European countries such as the UK. The ME system boosted an affirmation of the profession of *educador de infância* in its educational role, on par with the status of primary teachers, and as their status was seen as higher, a lot of teachers from the IPSS and private schools moved into the state sector. The fragmentation of ECE was now more evident with the ME sector providing education and the social services providing mainly social care. Despite this view of the two systems, it is wrong to assume that IPSS nurseries did not provide any education. In fact, much innovative pedagogy developed during the 1960s and 1970s in some private centres. A study conducted in the 1990s used the Early Childhood Environmental

Rating Scale (Harms and Clifford, 1980) to evaluate the quality of the environment in pre-schools and did not find any significant differences between the two systems in terms of quality (Bairrão, Abreu-Lima and Morgado, 1997; Bairrão, 1998). This might be due to the similar training the staff receives.

Besides care versus education, ECE history in Portugal is the history of another duality that separates pre-school education from primary education (Cardona, 1997). This historical fact is also the story of differing maturationist and instructionist views about how children learn and what experiences are appropriate for pre-school children. The views of pedagogy in ECE have been influenced by the immense work of pedagogues and psychologists who emphasised the different nature of the young child and their particular developmental trends (the work of Piaget, Gessel, Montessori, and Decroly among others), and the emphasis on the social-emotional development of the child with an emphasis on creative activities and sociodramatic play extended the limited hygienist/health view espoused in the centres for deprived children. The primary school was seen as the paradigm of the traditional school while the nursery school was seen as liberating and creative, freeing the child from the constraints of formal instruction. Even today, some nursery school teachers do not see themselves as teachers but as educators and they are reluctant to use the word 'teaching' in describing what they do (Cardona, 2004) . This has also been identified in other countries such as the UK, Australia and New Zealand (Siraj-Blatchford, 2004).

A comprehensive view of ECE

In 1994, João Formosinho's report for the National Council of Education (NCE) about ECE highlighted the urgent need for an integrative system of ECE and a clear intervention from the state. In 1995, Formosinho and Vasconcelos (1996) were responsible for developing a strategic report for the newly appointed socialist government. The political agenda was to expand and develop ECE services and to provide an integrated view of quality (care and education) into both systems. The government set up a programme which integrated all ministries concerned with pre-school education and during the following years produced legislation which constituted perhaps the most major investment Portugal had ever made in ECE (OECD, 2001; Vasconcelos, 2005). Many changes were effected which had an impact not only on the quantity of services provided but also and especially on the quality of ECE in Portugal:

- From 54% attendance of the population in pre-school in 1995 to 77% coverage today (higher rates for 5 year olds)
- All services combined a focus on education with a complementary focus on care and answering families' needs
- All services are supervised by the Ministry of Education in educational terms;
- Teachers' training has become a four-year university degree
- Every classroom of 25 children (maximum) should have one trained teacher
- Curriculum Guidelines for pre-school education where published for the first time

Curriculum Guidelines

The Curriculum Guidelines for pre-school Education (CG) was the first pre-school curriculum document published in Portugal. The curriculum guidelines foster a broad and integrated approach to learning where the child is seen as "the subject (agent) of the educational process – which means starting with what the child knows and valuing his/her knowledge as the basis of the new learning. The new learning is intended to develop curiosity, a critical approach and the ability to learn how to learn.

The CG have a socio-constructivist approach to learning (Gaspar, 1998) highlighting the role of the context through an ecological perspective (Ministério da Educação, 1997) and constitute an orientation for the teachers in terms of what they should do (planning and evaluation, links with families, school and community, and experiences in different content areas) and not as age related learning outcomes. Despite the sustained process of consultation with nursery teachers, academics and researchers in the ECE field which led to an extremely positive acceptance of the document by nursery teachers, this document also challenged some of the traditional views of the role of nursery teachers in terms of their role in children's learning and how they organise the pedagogical experiences for children. The CG uses, for the first time, areas of knowledge to define the curriculum. This makes it quite distinct from the traditional organisation in areas of development (cognitive, socio-affective, motor) and is based on the view that development and learning are not separable (Ministério da Educação, 1997:47).

The curriculum guidelines advocate that children should have access and engage with different "areas of knowledge" which include content knowledge (concepts, facts, symbols, products), skills, attitudes (critical), and values (spiritual, aesthetic, moral and

civic) which are socially relevant. Learning experiences should integrate and not separate different areas of knowledge, which are: Personal and social development; Expression and communication including different domains; movement, musical, plastic and dramatic expressions; language, literacy and initial approach to writing; mathematics; Knowledge of the world

The introduction of areas of knowledge was justified as a way of providing continuity between pre-school and primary education and to promote communication between pre-school teachers (*educadoras de infância*) and primary teachers (op cit). These two professional groups have been much apart from each other and hold, sometimes, contradictory views on how children should learn as well as on their role as teachers. This fact was seen as preventing continuity and transition from one level of education to the other (Folque, 2002; Lopes-da-Silva, 2004a).

After eight years of implementation of the CG, research tells us that although nursery teachers did make a positive use of the document they find developmental areas a more useful organisational category (Lopes-da-Silva, 2004b). Some early research has also shown that *educadores de infância* value global aspects of development more than specific academic or cognitive ones (Bairrão, Marques and Abreu, 1986; F. P. C. E., 1997).

The CG does not advocate a particular pedagogical model but encourages nursery teachers to reconstruct their own pedagogies within a socio-constructive approach. Despite the lack of research which characterise *educadores de infância* professionals, some small scale studies indicate that 25% of *educadores de infância* applied a pedagogical model (Vasconcelos, 1990; Lopes-da-Silva, 2004b).

Pedagogical models

The adoption of pedagogical models in ECE in Portugal is in some ways a story of the resistance of pre-school educators to a continuum with primary education. It is interesting to see that the two most significant Portuguese pedagogical models were developed within associations which were concerned with primary education as well as pre-school education. The João de Deus pedagogical model during the 'first republic' (1910) and the Movimento da Escola Moderna (MEM) model as a reaction to the dictatorship of Salazar in the 60s-70s arose from the vision of some educationalists who saw the role of the school as a condition for the liberation of oppressed uncultured

people. Both educational models have a major emphasis on literacy, which is driven from the understanding of the role of literacy in the development of humankind (Vasconcelos, 2005). As we have been noticing, the history of ECE in Portugal is also a history that emphasises the 'innately good child' (Rousseau), one that should develop their inner self and mental abilities according to their stages of development. This maturationist view did not considered the introduction to reading and writing as appropriate for the pre-school years. Apart from the *educadores de infância* allied to both models who were a minority (approximately 10%), *educadores de infância* generally did not follow a 'prescribed' pedagogical model (or curriculum) and valued their own autonomy and freedom in creating an environment which facilitated the development of the whole child. This resistance to adopt pedagogical models was based on the view that they would limit the creativity of the teacher to answer to the child's inner needs (Oliveira-Formosinho, 2001). Nursery teachers would rather use a potpourri of pedagogic strategies (projects, topic work, and free play) than adopting one 'prescribed' pedagogical model, particularly the ones which introduce young children to learning within different subject knowledge. But, with the valorisation of the educational role of nursery teachers and the dissemination of international experiences and research promoted by the Calouste Gulbenkian Foundation in the 1980s, followed by the work of João Formosinho and Júlia Oliveira-Formosinho in the north of Portugal, pre-school pedagogical models began to be seen as tools for quality education (Formosinho, 1996). The dissemination of the High-scope model (originating from the US) in Setúbal and Alentejo (Lopes-da-Silva and Miranda, 1990) as well as in the north of Portugal and the publication of a book (Oliveira-Formosinho et al., 1996) on pedagogical models in pre-school education (featuring High-scope, MEM and Reggio Emilia approaches) contributed to a better acceptance of practices grounded in particular models. At the same time an increased academic interest in the Portuguese MEM pedagogy has led to the wider dissemination and development of the model for many nursery teachers. The MEM model seems to offer an approach which responds to the new trends of the ECE system (with its renewed emphasis on citizenship and democratic education, the role of the social/cultural context in providing significant learning experiences and a continuum with the primary school system), and at the same time keeps in line with the new theoretical ideas developed by socio-constructivists (Bruner, 1972; Vygotsky, 1978). In fact the publication of the Curriculum Guidelines

which encompass all these trends, might have also contributed to the increasing attention that has been paid to the MEM model.

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Appendix 3 Teachers' interview schedules

Interview #1 Classroom organisation (space, materials and time)

Introduction: In this interview I would like you to explain to me how the context of learning is organized. We will talk about the classroom space and the organisation of materials as well as the organisation of time.	**Purpose:** Invite the teacher to speak about her practice. Providing her with a brief about the subjects we are going to cover will help her to structure her thoughts and not speak about everything at the same time

Questions	Prompts	Purposes
	Space and materials	
Lets begin with the classroom organisation. Can you describe to me the different areas you have in the classroom and why?	*Are there areas that can change? Which ones? How?*	Noticing how she names each area; is there an epistemic differentiation? What areas of the curriculum are most valued? What kind of activity children do in each area?
What types of materials do you have in each area?	*What are your concerns in relation to the materials?*	The types of materials can also provide us with an idea about the different things children can do in each area as well as the teacher's criteria for quality .
What about the displays? What kinds of materials do you display and what are their functions?		Function of the displays, what is most valued? Teachers aims
Which piloting tools do you have?	*What are there functions? How do children use them?*	The purposes / uses of piloting tools in the classroom. Teacher's perceptions about their role in children's learning.
Can you tell me a little bit about the rules in the classroom? How do children use these areas, materials?	*Can they have access to all of them at any time? How are rules established?*	
In your perspective, what is the importance of the organisation of space and materials to children's learning?		Meaning given by the teacher to this component. Views of learning.

Questions	Prompts	Purposes
	Time	
Now, lets talk about how time is organized in your classroom.		Introduction to new topic
Can you describe a common daily routine?	*What do children do in that time?* *What is the aim of this activity?*	Differentiation of learning situations; balance between individual and group activities
What about the weekly routine? Can you explain how it is organized?	*What do children do in that time?* *What is the aim of this activity?*	Differentiation of learning situations
To what extent is this routine flexible?	*What are the main reasons for "breaking the routine"*	Teachers sensitivity to context; consistency;
In your opinion how important is a time routine for children's learning?	*In which way?*	Teachers' views of learning processes, and how contextual factors affect them

Interview #2 Planning and assessment organisation and work with parents and community

Introduction: In this interview I would like you to explain to me how you organise two components of your teaching practice: planning and assessment practices, working with parents and the community	Invite the teacher to speak about her practice. Providing her with a brief about the subjects we are going to cover. Help her to structure her talk and not speak about everything at the same time

Questions	Prompts	Purposes
	Planning and assessment	
Can you tell me how you plan and assess in your practice?	*When do these things occur?* *Who is involved?*	Types of planning and assessment practices. Conditions in which they occur.
The teachers may refer to the planning and assessment practices undertaken with the children and others by themselves, with the team or on their own. Depending on the teacher's answer, the interview should be conducted so that she explains both types of practices and the way in which they complement and are connected to each other.		
In the MEM model, the curriculum management is a cooperative activity. How do you involve the children in these types of activities?		Teacher's views about cooperative management of the curriculum. Strategies for promoting children's participation.

Questions	Prompts	Purposes
Do you undergo other types of planning and assessment activities besides the ones with the children? Which ones?	*Why do you feel the need to do it?*	Planning and assessment practices. Topic to be fully explored in interview #4
In which way do they support your teaching practice?		Relationship between planning and assessment, practices and teaching
How do assessment practices impact in planning?		Links between planning and assessment
How do you use the piloting tools in planning? And in assessment?		The role of piloting tools in planning and assessment
Work with parents and Community		
What kind of interactions do you promote with parents	*For what purposes?*	Types of parental involvement activities and purposes
In what ways do parents participate in their children's learning?		Teachers' views about parental involvement in children's learning; level of involvement
How do you promote their participation in the classroom?		Strategies to involve parents in learning: information, participation
What about the community? What kind of interactions do you promote with the community?	*For what purposes do you promote these activities?*	Types of interactions with the community and thier function. Teachers views of learning and learning processes
How do you see the role of these interactions in children's learning?		Teacher's perceptions of the role of community in children's learning

Interview #3 Teachers training and MEM pedagogy

Introduction: Today we are going to speak about your professional history and the role of MEM in your professional development and practice	Setting up the focus for the interview

Questions	Prompts	Purposes
Professional history		
When and how did you decide to become a ECE teacher?	*What factors contributed to this choice?*	Motivations for the choice of this profession and determining factors. Views about the teaching profession
Where did you do your teachers' training?		Training experience
How did you find your training?	*Positive aspects of the training* *Negative aspect of the training*	Views about the training, how they set up the base for the teaching profession and their professional thinking.
Can you tell me about your work placements?	*Where? For how long?* *Positive experiences?* *Negative experiences?*	Teachers' experience The influence of placements in teachers professional thinking
After your initial training did you have any other training experiences?	*Which kind? When and Where?*	Training trajectory Opportunities Interests
Which ones do you consider had an impact on your professional development?	*In what ways?*	Teachers' development
The MEM pedagogy		
How did you first get acquainted with MEM?		The place of MEM in the teacher's professional history
When did you decide to follow the MEM approach?	*What made you make this decision?*	Perceived advantages of adopting the MEM pedagogical model Contributing factors
What do you consider to be the main distinctive features of the MEM pedagogy in ECE?	*What are the most interesting ones?* *What about the most difficult ones?*	Teachers' perceptions about the MEM pedagogy. Teachers' critical evaluation of this model.
In what terms did the adoption of the MEM pedagogy help in the quality of your practice?	*In which ways did your practice change when you adopted the MEM model?*	Impact of MEM pedagogical model in teachers professional development

Questions	Prompts	Purposes
In which way do you think that the particular type of nursery you are working in (IPSS or ME) shape or constrain the adoption of MEM pedagogical model?	*Are their institutional rules such as time schedules or grouping policies that interfere with your own time or group organisation? Does the institution supports and approve of the MEM pedagogy? Do you feel any difficulties for example in relation to your colleagues?*	How the MEM pedagogy adopted in the classroom is supported or constrained by institutional factors.
Do you participate in the MEM movement?	*In which activities? How much?*	Level of participation in MEM Experiences within MEM
What do you think about this movement?	*What are the things that you most like about it? What are the things you do not like so much?*	Teachers perceptions about MEM
Had your views on young children's learning and pedagogy changed since your training as an early years teacher?	*In what ways?*	General trends of professional development

Interview #4 Learning and pedagogy

Introduction: Today we are going to concentrate our talk on children's learning and how you as a teacher conceptualise your role and what your educational options are. We will also cover also the processes of regulating learning and how you use the CG.	Setting up the focus for the interview

Questions	Prompts	Purposes
What are your main concerns regarding children's learning?	*What kinds of things do you think it is important for children to learn while they are in Pre-school?*	Teachers perspectives about learning; Identified types of learning (dispositions, skills, content, etc.)
When you think about how children learn, what are your main concerns?	*What types of learning do you give priority to in Pre-school? Would you like to refer to other types of learning?*	Teachers' perspectives about young children learning priorities.
When you think about how children learn, which are the learning strategies that promote such learning?		Teacher's views about how children learn.

Questions	Prompts	Purposes
What is the role of the teacher in supporting children's learning?	*What kind of pedagogical strategies do you adopt? What experiences do you provide them?*	Teachers' perspectives about the role of the teacher in children's learning. Pedagogical approaches and strategies
Throughout the year I've been listening to you refer to 'practice' to learn. Can you explain how you understand this concept?		Amoreira teacher – clarification of a concept used by her in her practice.
In MEM pedagogy there is the idea that the processes of knowledge construction in schools should be as close to the authentic processes that society adopts in different areas of knowledge. How does this happen in practice?	*How do you think children understand this?*	Teachers' views about learning processes. Teachers understanding of the MEM model (in one aspect of it).
Regulation of learning		
In your view what kind of things do you think children gain from participating in curriculum management, in decision-making processes?	*How do you see the impact of planning and assessment practices in children's learning?*	Teachers' perceptions about the role of cooperative management in children's learning.
When you plan with the children, what are the features you want children to focus on during the planning process? And during assessment?		Teachers' intentions in planning and assessment activities with children.
How do children respond to your intentions?	*Which are the main difficulties for children in planning and evaluating? How do you help them to overcome these difficulties?*	Teachers' perceptions of the experiences children have in cooperative management. Possible problems and teachers strategies to overcome them.
In your group you have children with different ages, knowledge and interests. How do you differentiate in order to respond to their needs?		Teachers' perceptions about differentiation and about their practices.

Questions	Prompts	Purposes
How do you ensure that all children have access to a broad and diverse curriculum?		Management of the curriculum; regulation of learning.
Curriculum guidelines		
How do you incorporate the Curriculum Guidelines (CG) in your teaching practice?		How teachers use C. G. and their perceptions about the document.
How do you see the adoption of MEM pedagogical model in relation to CG?	*Are they compatible? Do they complement each other? In what ways?*	Teachers' perceptions about C. G. document and how it relates to MEM approach.
In the CG they mention "it is important that Pre-school children learn to learn" (:17) What does this mean for you?		Teacher's perceptions about 'learning to learn'.

Appendix 4 Children's interview schedules

"Why children come to school"

Children were interviewed individually in informal situations, while playing in the playground or in the classroom. Answers were written down.

"Why do you come to school?" (The level of generalisation given by the child would prompt further questions on the purposes of coming to school.

"And why do you think children come to school?" ... "What do they come here for?"

"Do you think it is important? Why?"

"Routine, CT, CM and steering tools"

Children were interviewed in same age pairs of their choice. The interview occurred during the 'activities and projects' time and was carried out outside the classroom (in the Magnólia library and in the Amoreira after-school activities room). A piece of paper named "the interview" was displayed near the activities chart so that children would plan being interviewed as they did with other activities.

Introduction

As you know I've been coming here throughout the year to do some work on what do you do in the classroom, how you learn, etc. Now before going back to my University, I want you to help me here with some things to check that all the information I have is correct and that I understood how things work in this classroom.

Daily routine

"So, let's see first, can you tell me... what you do here from when you arrive in the morning until the end of the afternoon when you go back home?"

Children's answers were written down. If they forgot some part of the routine prompts were used (*"so, after the CM you go..."*) to give them the opportunity to think and recall some missed activity.

Commenting on photographs

The children were than presented with photographs from their classroom and asked to identify whole group activities (CT and CM), the steering tools *("What are you doing in here?" "What is this?" "What is written in here?"*) and explain their purposes (*"What is this for?"*) and how they were used in the classroom (rules, division of labour) ("*Who writes in here?" "How do you use this?"*).

In the end I praised their ability to inform me and dismissed them.

Photographs used in children's interviews

Magnólia Classroom **Amoreira classroom**

Appendix 5 Types / amount of data & schedule

September 03 to May 04

Type	Days	Frequency	Observations
Field notes	38 – Amoreira 42 - Magnólia	2 - 3 days /week 2 weeks /month	Covering classroom life and institutional life. Focus observations of 6 children and the teacher in different areas throughout the year
Video Monday CM	7- Amoreira 8 - Magnólia	Once a month	Monday Morning Council Meeting - Reception planning the week / responsibilities
Video Friday CM	8 (+1 audio) Amoreira 7 (+2 audio) Magnólia	Once a month	Council meeting - Evaluation of the week. Reading the diary, evaluating behaviours and activities and planning Audio recording was necessary before having parental consent for video recording.
Video Morning CM	8 / setting	Once a month	Council Meetings Daily Reception / Planning CM
Video Afternoon M	8 / setting	Once a month	Council Meetings Afternoon Daily Evaluation CM
Video CT	9 – Amoreira 8 (+1 audio) Magnólia	Once a month	Communication Time (Children presenting work to colleagues)
Interviews with adults			
Teachers #1	1/ setting	October	Classroom – space /time
Teachers # 2	1/ setting	October	Classroom – planning & assessment; working with parents & community
Teachers # 3	1/ setting	November	Professional history / MEM
Teachers # 4	1/ setting	May	Pedagogy and Learning
Other adults	1 each adult	Feb - April	The adults differ in each setting. Helpers, head, others
Parents	6 / setting	April	Parents of focus children (3 , 4 , and 5 year-old boys and girls)

Type	Days	Frequency	Observations
Interviews with children			
'Learning'	1/child	End Nov	Individual interviews; Only 4- and 5- year-old in Nov 03. Informal conversations throughout the year.
"Why children come to school"	1/ child	March & April	Individual conversation during activities time or in playground
"Routine, steering tools & group situations"	8 pairs Amoreira 11 pairs+ 1 child Magnólia	May & June	Pairs of same-age children

Documents			
Classroom Diaries	16 / setting	The weeks of data collection	Photographs
Activities chart	4 – Amoreira 8 - Magnólia	All between Sept 03 and May 04 except December	Photographs
Attendance chart	8 /setting	All between Sept 03 and May 04 except December	Photographs
Responsibilities chart	1/setting		Photographs
Social rules chart	All	As constructed throughout the year	Photographs
Other registers or children's productions		As appropriate through year	Photographs
Classroom displays	4/setting	October, November, March & May	Photographs of the walls and areas as they change through the year
Institution Educational Project; Classroom curriculum project.	2/setting		Photocopies
Teachers' planning and assessment instruments	Appropriate sample		Individual records only of focus children

Appendix 6 'Research contract'

Research contract
Maria da Assunção Folque, lecturer at the Universidade de Évora and PhD student at the Institute of Education London University
&
Magnólia Creche

This contract concerns the research that will be carried out by Maria da Assunção Folque, in the context of her PhD, taking place at Crèche Magnólia between September 2003 and June 2004.

The study aims to investigate the Portuguese Modern Movement pedagogical model in two Pre-school contexts, and the way in which the Pre-school children's learning is constructed in these two contexts.

The research questions:

- 1) What are the Key features of the MEM model and how are these experienced and perceived in the two institutional contexts?
- 2) How does the MEM pedagogy as practiced in the two classrooms enhances or constrains children's learning to learn? How do young children move towards a more full participation in the group?

The researcher's role:
The researcher is a former nursery teacher with 12 years of practice with children in Pre-school. She will participate discretely and progressively in the activities developed by Patrícia in the Magnólia classroom, through participant observation with minimal involvement so that it will not deliberately interfere in the natural run of the educational activities and the children's behaviours. The collection data activities will be carried out after consultation with Patricia agreeing in collaboration about the plan.

Data collected during the study will include:

- Written, audio, video and photographic records of educational activities and from the context where they developed.
- Interviews with the head, the teacher, the helper and the children within the group.
- Interviews with parents
- Documentation including steering tools, planning and evaluation documents, the institutional educational projects and the classroom curricular project.
- Children's products (drawings, texts, etc.)

Researcher's responsibilities:

- To ensure the participants and the institution anonymity and the confidentiality of the data collected during the study and in the results dissemination process.
- To inform the institution and the children's families about the aims and methods of the study, as well as obtaining informed consent for children's participation.

- To agree with the teacher about the research activities' plans and the most appropriate methods to ensure the normal run of the nursery activities.
- Disseminate within the school community the results of the study using what the partners (families and staff) consider to be the most appropriate means.
- To respect and guarantee voluntary participation of all participants in the study.

Institution responsibilities:

- Provide open access to information generally available to teachers, about the nursery, the children and families.
- Provide access to the educational documents concerning planning and evaluation as well as the children's products (photographs).
- Inform in good time the researcher of any fact could prevent the normal development of the research activities.

The researcher	The teacher	The head of the Magnólia crèche
Assunção Folque	Patrícia	Zulmira

Magnólia, September 2003

Appendix 7 'Parental consent'

Study of the Portuguese Morden School Movement pedagogical model and children's learning in Pre-school.
Amoreira Nursery School
Parental consent

Having been informed about the study to be conducted by Maria Assunção Folque, lecturer at the University of Évora, in the Amoreira nursery-school; being informed about the focus of the study – the Portuguese Morden School Movement pedagogical model and how Pre-school children learn in this context, I agree to let my child to participate in the activities inherent to the collection of data for the study carried out by the researcher in close collaboration with the teacher Carolina, between October 2003 and June 2004.

I understand that the data collected through observations and interviews and registered with video, photographs and audio, are confidential (name of institution and participants were changed) and would only be used in academic context of research and training. The right to withdraw participation in the study was also assured.

Name of the child	Parents' signature

Amoreira, October 2003

Sample of Annual summary of Magnolia's CT

Day	Children	Focus	Content
15.09.03 Field-notes Mg Set. page. 3/5 From 11.30 to 12.00	Fc (4:10) J St (5:0)	Experiment with salt (PRE; PLA)	Change of place because of materials. Children think they are going to do cooking. B says a communication is when someone has something to show and shows to his friends. Teacher adds that they will show how to do it. Fc and J St start describing the process. Teacher helps to structure: its materials what happens? What did you found out, learned? B say it happens only to some things. Teacher how can we find out? (teacher register answers.) another question razes and they plan to find out tomorrow.
	Gl (5:8) & A (5:3)	Story written in the office (writing and drawing) (PRE)	A tells the story. Teacher comments on the position of the paper. Teacher asks Gl if he wants her to tell the story. He agrees and she starts but Gl does it later. She comments again on the "attitude" of not showing the drawings to others. He say that he shows in the end teacher agrees.

Day	Children	Focus	Content
16.09.03 Field notes Mg Out. pag:12/13 From 11.35 to 12.05	T (5:5)	Book from home (PRE; STO)	T tells the story with a book. Teacher comments on showing the illustrations. She says she shows later. Teacher helps T asking questions in order to complement the story. When was this? Why this happens? T takes control.
	Sv (5:7) J (5:7)	Pirates project (PRE)	Children present with the support of their productions. Teacher supports the children presenting clarifying and remembering to speak about everything. Focus on content information as well as inquiry project How did we found out? Where we went to find out. What have we found out. In the end the other children comment, asked questions and related with their own knowledge and experience. The communication was highly prepared during lunch time.

Day	Children	Focus	Content
22.09.03 Field notes (book) From 11.45 to 12.05	Pt(4:0)	Cream and fresh cheese label Inquiry (PRE; PLA)	Pt shows something she found out at home. Cream is made out of milk. She says that it is from boiling milk and she doesn't like. Group discuss how to put milk to boil. Gl say in the sun, Pt in the fire and Fd in the microwave. They want to see but they don't have microwave. Teacher asks where Maria (the cooker) does it: in the stove. They plan (in the diary) to boil the milk to see cream. Teacher reads the ingredients of fresh cheese. They want to do it. J Sv says he doesn't like and the teacher asks the group to think about other ways of using the cheese. Fd say we could use ham (in the bread) and teacher *says his head is not thinking well.* Teacher asks again the group to think about some use for the cheese in order to answer J Sv's quest. Teacher writes what was said in communication

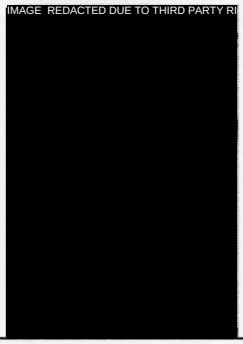
Sample of Annual summary of Amoreira's CT

Day	Children	Focus	Content
13.11.03 Fields notes pag.12/13		Presenting at CT (DIS)	First the teacher speaks about the children who do not present. It doesn't mean that they did not work. Dg (5:3), Ad (5:8) worked a lot but haven't finished. Valuing the process rather then the product. Td (4:10) did not work because he comes late. Others mentioned that he has been coming sooner but today he came late. He agrees to ask his father. Child's responsibility
	Mn (4:7)	Text (PRE)	Teacher value the fact that Mn improved her illustration. Asks others to look for improvements and than she mention the colouring. Other comments on beauty. Dg (5:3) mention the size of the door. Mn reacts and say she likes this way. Teacher incentives progression, improvement "being big" and ask the others for helping Mn.
From 11.40 to 12.10	T (3:10)	Text and Play dough (PRE)	T reads (bits of the text). Teacher asks if she drew the content of the text. Illustrating is to draw what the text says. T says what she made in the Play dough and the teacher asks how she did. She uses gesture to show the process. Teacher values training and improvement. Other piece of Play dough and T uses gestures again to explain the process. Teacher highlights the way she uses her hand. Technical knowledge, skills.
	C (3:10)	Play dough (PRE)	Explains what it is and who helped her. Them she explains how she did with gestures see picture)
	Jr (5:10)	Drawing (PRE)	Explains what it is. Other comments that the chimney looks old. Dg (5:3) defends saying that some houses are old. Teacher asks Jr if he agrees with the criticism and Jr says yes. Teacher says he is going to improve.
	L (4:4)	Writing name (PRE)	Teacher stresses doing something for the first time.

Day	Children	Focus	Content
26.11.03 Field notes ME Nov. pag. 23/25	L (4:4)	Writing in the computer (PRE)	Teacher presents L text and stresses Jr(5:10)'s help. She asks L to read. Stresses that he did it in lower cases and in uppercases. She explains that L is going to put it in the office as the text of the week. Explaining why only Wednesday they are having it.
	Dg (5:3)	New folder and name card in computer (PRE)	Dg explains why he had to do another folder. He explains what he did in the computer. His name card with big letters and small letters. Teacher rephrases uppercases and lowercases. To show how you can do it in the computer. Teacher explains that they are doing new cards because some children couldn't write in the beginning but now they can, like Mn (4:7).
From 11.42 to 12.04	Ad (5:8)	Cut and paste (PRE)	She shows and say that she cut them out of the book. Teacher ask what type of things they are (classification) Ad say toys and teacher what type of toys? Games. Teacher rephrases a "conjunto" of games. And values training and how well she does it. Jr (5:10) points out some part that is not well cut and teacher ignores.
	C (3:10)	Cut and paste (PRE)	C show and Dg (5:3) praises "she worked a lot!" There is not a single space left! But L(4:4) finds out a cut head. Teachers accepts "just a little bit" Dg (5:3) says that she is practicing and it is coming beautifully . The teacher explains that perhaps there was some rush because she said it was time to clear up. The teacher takes responsibility at the same time she focus on the cause of the error.
	T 3:10)	Cut and paste (PRE)	T shows and Dg (5:3) say she is practicing but that she could do better. Td (4:10) congratulates her.
	Fp (3:3)		Is not presenting. The teacher say that she is doing cut and paste over and over again and that she might be tired. Values choosing different activities. Teacher had a conversation near the activities chart.

Appendix 9 'Children's Records in Amoreira'

Children's 'photos' of junk modeling

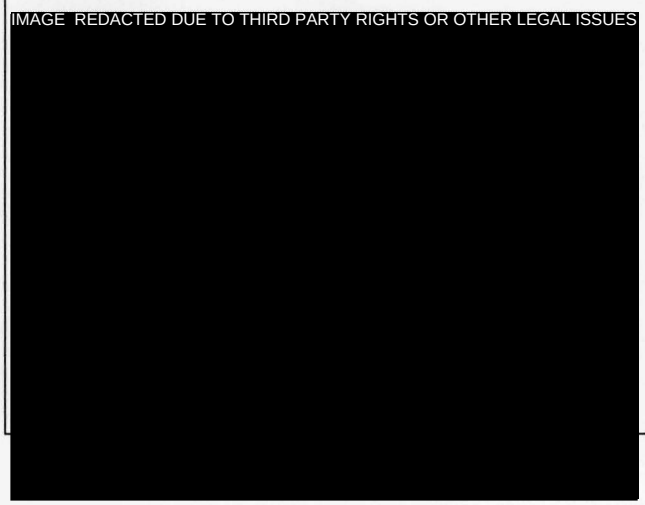


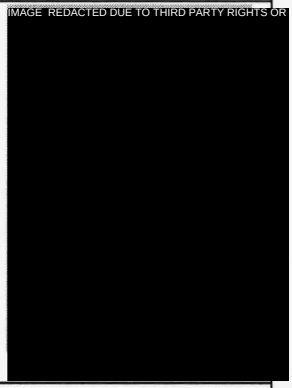
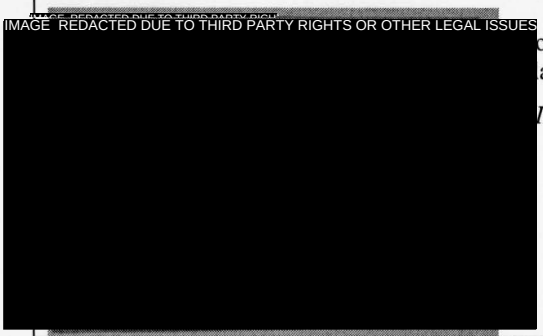
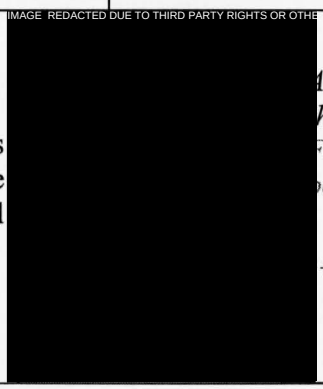
Example of a "photo" of a junk model construction. On the top of the sheet is written "Construction" and underneath a space where the teacher or the child writes the construction name ("Doll"). The main space is divided into different parts: "What I needed" – where children have to draw the materials used, and "How it looks" – where they have to draw the final product. On the lower section children write their name and the date.

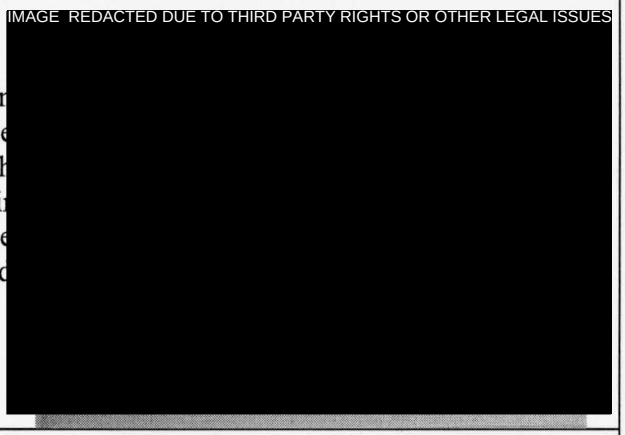
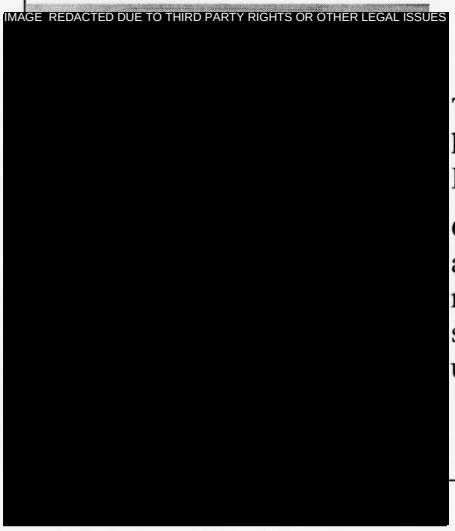
Jr (6:3) is presenting a junk model giraffe to the group and uses the "photo" to explain which materials he used, how it was done and the final product. (Amoreira May)

The Cooking Recipe Record

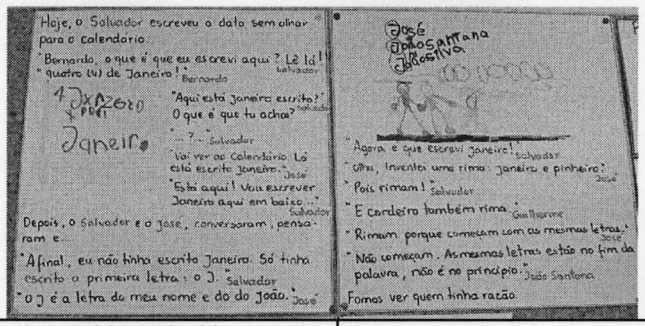
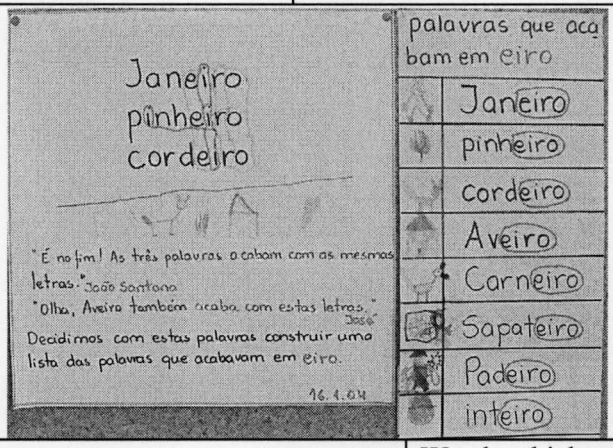
The week's cooking recipe: Pumpkin cakes. This is a group record. On the right hand side they drew the "Ingredients" and on the left hand side the process "How do you do it". The teacher's writing complements the children's graphic representation. The teacher uses numbers to represent quantity (ingredients) and order (process). The last section named "the group" collects all the participants' signatures. The colours used in the ingredients became conventional and after being used for the first time they were consistently repeated.



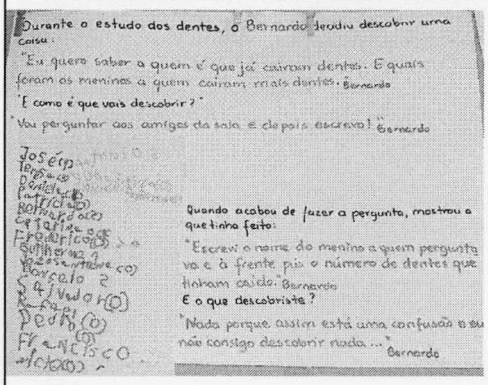
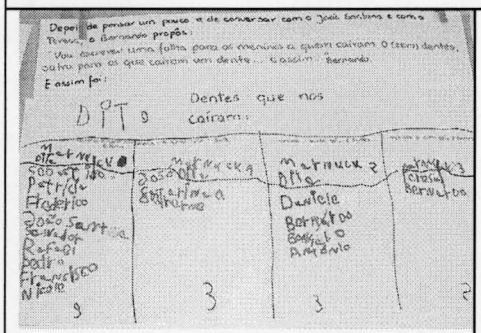
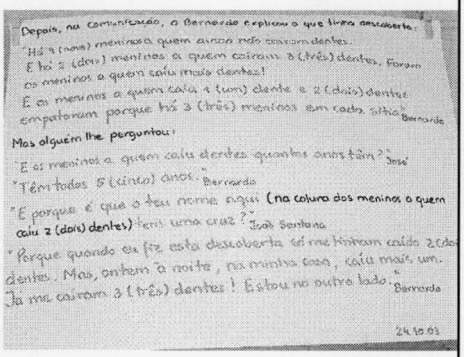
Record of Lab Experiments
On the top is written "laboratory", next a section called "What I needed" to draw the materials used in the experiment and the next section is either "What I found" or " What happened". In the end the children write their names. Sometimes the teacher writes what the children say about the process and the results of the experiment. This record was done by L and D A after they spent some time in the lab exploring the electrical materials and managed to light a lamp. They used this record to tell the group about their experience in CT (Amoreira February). 
Social rules
 ocial rules negotiated at CM and displayed in the assroom. *Inside this classroom we can only walk, not run"*
Children's texts
 *I saw Cátia _when I was at Marlene's shop.* *Mn* Mn uses the name tags to copy her colleagues' names in the spaces left by the teacher. She
The teacher uses different litteracies semiotic activity to communicate the message: writing and mathematical symbols.  *1 little pig died and hree are alive.* *Four little pigs were born.* *+3=4* *Dg*

Records of outings and visits to the classroom
 This is a record of a visit to Dg's house to see the little pigs that were born. Each idea was registered writing the text at the computer and drawing with crayons. A histogram software was used to count the number of animals of different kinds. The front cover was also done using software that allowed children to design stamps and display them as a border.
 This is one page from a book children did about the visit of the nurses to the classroom. This was part of a health campaign. Children registered their own experiences using both the computer and drawing with pens and crayons.
 This is a poster about their visit to Ms. Aldina's husband's bakery to watch him making the traditional Easter cakes '*folares*'. Children used the computer to print some photographs and to write the texts. After seeing that they needed more illustrations of the visit they drew some of the situations related to the visit (i.e. going on a bus) using pens and crayons.

Appendix 10 'Documentation in Magnólia'

Language, words, writing…. Explorations and learning	
	
Today Sv. wrote the date without looking at the calendar. "B what have I written? Have a look!" (Sv) "fourth (4) of January!" (B) "Is January written here?" (Sv.) What do you think? (*Teacher*) "…?..." (Sv) "Go and see on the calendar. It's written January there. (J.) "It's here! I am going to write January down here…" (Sv.) Then, Sv and J. talked, think, and … "I did not write January. Only the first letter: J" (Sv.) "J is my name's letter and J. St.'s." (J.)	"Now I've written January!" (Sv.) "Look, I invented a rhyme: Janeiro and *Pinheiro* (pinetree)" (J.) "Yes, they rhyme" (Sv.) "And *carteiro* (postman) also rhymes" (Gl.) "They rhyme cause they start with the same letters" (J.) "They don't start. The same letters are in the end, not in the beginning". (J. St.) We went to look who was right.
	
"It's in the end"! The three words end up with the same letters" (J. St.) "Look, Aveiro also ends up with these letters." (J.) With these words, we decided to do a list of words ending with eiro. 16.1.04	Words which end with eiro . January (Janeiro) . Pine tree (Pinheiro) . Lamb (Cordeiro) . Aveiro (Aveiro) . Sheep (Carneiro) . Shoemaker (Sapateiro) . Baker (Padeiro) . Intact (Inteiro)

Exploring words with many meanings and creating a book	
	fter reading the story "Elmer and randfather Elmo" we found some vords that had many meanings: The word is the same but has ifferent meanings" Gl Ve asked other classrooms to help nd more of these words and we ound many: osa (Rose) orto (Port) .....
There are mothers who…	And we decided to invent a book about mothers using such words.
	There are mothers who like to wear a rose (pink) skirt. There are mothers who like to receive a rose… There are mothers who have a daughter named Rose
Snails project documentation	
	
We decided to do a project about snails We already knew some things: They hide in their shells to protect themselves from who wants to eat them Gç Or want to harm Dg I don't think! I think that it is only to sleep. Sb When they move they urinate Sv And poo also! Dg They eat lettuce and beans Sb I think they like earth Gç and Dg	And we decided what we wanted to know And where we would search

B's inquiry about lost teeth in the classroom. Presented at Communication Time	
	During the teeth study, B decided to find out about something: I want to know who have lost teeth. And which children have more. B How are you going to find it out? I am going to ask my friends and then I will write! B When he finished asking his friends, he showed me what he had done: I wrote the children's names and along side their number of lost teeth. B And what did you find out? Nothing, cause this is very messy and I can't figure out what I wanted. B
	After thinking for a while and having talked to J St and T, B suggested: "I am going to write a piece of paper for the ones that have lost 0 (zero) teeth, another one for the ones with one lost tooth...and so on..." B And that's how he did it: Our lost teeth: (the four columns include the names of children who have lost 0, 1, 2, and 3 teeth, and the numbers down the column sum up the number of children in each column)
	Them at Communication, B explained what he found out: "There are 9 (nine) children that had not lost any teeth. And there are 2 (two) children with 3 (three) lost teeth. They were the ones with the most lost teeth. And the children with 1 (one) and 2 (two) lost teeth were equal because there are 3 (three) children in each one." B But someone asked: "How old are the children which lost their teeth? J "They are all 5 (five) years old. B "And why does your name here (at the column for 2 lost teeth) have a cross? J St "Because when I first did this I had only lost 2 teeth. But yesterday evening, at home, another one fell out. I have already lost 3(three) teeth. I am on the other side. B

Appendix 11 'Summary of teachers' and children's views of activities'

1 - Summary of the participants views of CMs at the Amoreira classroom

	Carolina	Children (8 pairs)
Create a community	Welcoming each individual into the community	
	To share own experiences and pass on to the group the things children bring from home	*to show, tell and write* *******
Learning to live in community / society	Discuss issues about living in a society and being part of a community	*talk and solve problems together* *******
	create rules for being in the classroom, living in a group	*Young ones learn not to do silly things* *
		For children who liked and gave others a hug ***
	Discussing values and social rules	
Planning and evaluating together	Remember what was agreed and needs to be finished	*to read and write in the diary* *******
	Planning the day	*Diary - To see what we've done and what we want to do* ******
		Daily routine – MCM we plan **
Learning to learn	Semiotic activity: giving names to things	
	Regulate own learning	

* Number of interviews where it was mentioned

2. Summary of the participants views of CMs at the Magnólia classroom

	Patrícia	Children (11 pairs + 1 child)
Planning and evaluating together	Taking responsibility in curriculum	To choose what we are going to do ********
		Daily plan to evaluate what we did ******
	Taking decisions as a group	To agree, decide ****
	Becoming conscious about the curriculum	To tell what we've done and what we want to do **********
Learning to learn	Learn to plan and carry out projects and functional activities	Planning projects and important things ***
Learning to live in community / society	Discuss seriously the moral attitudes that occurred through the week	To see who behave and who didn't **********
	Emergence and discussion of social rules	Knowing what we can't do *****
		Diary – helps to behave * Learning to behave *
	Balance children's sharp evaluations of others	
		Being punished if not following the rules ****
		Doing important things **
		Doing what the teacher wants/says or doing things for the teacher ******
		We write things down **********
		Talk with each other ***
		and it is not playing, we cannot play in the meeting *

3. Summary of the children's and the teachers' perceptions of Activities and Projects in Amoreira

Teacher's perceptions	**Children's perceptions** (8 pairs)
Autonomous work	Working *******
	Playing *
Free choice within areas	Choice of different activities ******
Carrying out goal oriented activities negotiated within the group	
Time for children to engage in some activities that are culturally valued by the society (literacies)	To do activities or go and write at the office or play at the home corner *****
Spaces and materials to arise in children the eagerness to learn	
Deepen learning experiences through practice and teacher pedagogical tools (questions, provocative interaction, providing new materials or experiences).	
Learning processes such as cooperation and peer tutoring	

4. Summary of the children's and the teachers' perceptions of Activities Chart in Amoreira

Teacher's perceptions	**Children's perceptions** (8 pairs)
	The actions and rules involved in using the AC: marking a small circle, finding their names and the activities they want; looking at their own row to see if they have one open circle *******
Support independent planning	to support plan and carrying out the plan ***
Represents different options and turns them more visible to choose from	Supporting the choosing process ****
Support self-regulation: managing time; reflection on and evaluation of what they have been doing; planning varied types of activities	Supports evaluation of the activities they have been doing more often. ***
Conscious choices with learning as a goal: learning oriented planning (rationales for choices)	Plan more consciously based on the evaluation of what we've been doing. ***
Promotes sharing planning rationales and negotiating learning choices based on individual children's needs	
Tool for evaluation of the curriculum and the classroom environment by the group	

* Number of interviews where it was mentioned

5. Summary of the children's and the teachers' perceptions of Activities and Projects in Magnólia

Teacher's perceptions	Children's perceptions (11 pairs + 1 ind.)
Carry on children's interests and choices	Working *
	Playing *****
Free choice within areas	Choice of different activities *****
	To do activities or go and write at the office or play at the home corner **
Carrying out goal oriented activities negotiated within the group	To do important things such as projects *
Deepen learning experiences moving from exploration to purposeful activities and projects.	
Projects as integrated learning (different literacies) starting from children's interests	
Teacher role: pedagogical tools (questions to promote thinking, provocative interaction, promoting reflection about the activities they are doing..	
Learning processes such as cooperation and peer tutoring	

* Number of interviews where it was mentioned

6. Summary of the children's and the teachers' perceptions of the Activities Chart in Magnólia

Teacher's perceptions	Children's perceptions (11 pairs + 1 ind.)
	The actions and rules involved in using the AC: marking a small circle, ***
Support independent planning	Supporting the choosing process *****
	Support plan and carrying out the plan ****
Support self-regulation: reflection on and evaluation of what they have been doing.	Supports self-evaluation of the activities they have been doing. ****
Occasionally support children in choosing varied types of activities	Plan based on the evaluation of what we've been doing. **
	So that the teacher can know what they did ****
Tool for evaluation of the curriculum and the classroom environment by the group	

* Number of interviews where it was mentioned

7. Summary of the children's and the teachers' perceptions of CT in Amoreira

Teacher's perceptions	**Children's perceptions** (8pairs)
Showing what they've done and how; sharing	Showing ********
Learning through reflection on actions and processes	
Pass to the group the processes of learning	Teaching others explaining ****
	Learning/ knowing from others through listening and seeing their work products and processes *****
Learning through self and group evaluation	Learning through other's evaluation *******
Motivation for different experiences	Learning through copying (seeing) *
Motivation for collaboration	
	To ask questions **
	Enjoyment *

* Number of interviews where it was mentioned

8. Summary of the children's and the teachers' perceptions of CT in Magnólia classroom

Teacher's perceptions	**Children's perceptions** (11 pairs + 1 ind.)
Showing what they've done and how - sharing	Showing to friends *******
Learning through reflection on actions and processes	
Pass to the group and to the community what they learned and how they learned	Teaching others explaining ****
	Learning/ knowing from others through listening and seeing their work products and processes ******
Motivation for different experiences	
	Enjoyment *
	Meeting to decide / agree**
	Story**
	Being together with friends*

* Number of interviews where this was mentioned

Appendix 12 'Patterns of participation from analysis of CM piloting tools'

1. 'Showing telling and writing' frequencies of participation in Amoreira

Names and age in September	Out	Nov	Jan	Feb	Mar	April	May
Jr. 5:8		x		x	-		xx
V. 5:8				x	x	x	x
Ad. 5:6	x	xxx	x	xxxx	xx	xx	x
Mr. 5:3				xx	-		xx
Dg. 5:1	x	x	x	xx	x		x
Fr. 5:0		x					
Js. 4:8							
Tn. 4:8							
Td. 4:8							
Mn. 4:5		xxx	xx	xxxxx	xxx	xxxxx	xxxxx
Dn. 4:4			x	-	xx		
L. 4:2		xx	x	xxxx	xxxx	xxxxx	xxxxxx
D. A. 4:1			x				
Dt. 3:10		xx	x		xx		
Ag. 3:10				xxx	xx	xxxxx	xxx
C. 3:8	xxx	xx	x	xx	xx	xxxxxx	xxxxxx x
T. 3:8	x	xxx	x	xxx	xxx	xxx	xxxxx
Fp. 3:1	x	xx	x	xx	xxxxx	xxxx	xxxxxx
H. 2:11	x				x	x	x
Carolina	xx	x		x	xxxxxx	xx	x
Ms Aldina							
Margarida							

Shading sells mean that the child missed school more than 75% of the days
Dt usually came to school around 10 am
* Td, Tn and Js never attended morning CMs either they come latter or only in the afternoon.

2. Who's in the Amoreira diary columns?

Names and age in September	Writes in 'We liked'	Writes in 'We didn't like'	Is mentioned in 'we liked'	Is mentioned in 'we didn't like'	Name Writen in "we did"	Name written in "we want"
Jr. 5:8	3	1	6	6		1
V. 5:8	4	1	3	-		1
Ad. 5:6	3	-	2	-		2
Mr. 5:3	1	-	3	-		1
Dg. 5:1	6	3	3	2		3
Fr. 5:0	1	-	1	1		2
Js. 4:8	-	-	-	-		
Tn. 4:8	-	-	1	-		
Td. 4:8	1	1	3	1		
Mn. 4:5	4	4	5	6		2
Dn. 4:4	1	2	-	-		
L. 4:2	4	4	4	3		4
D. A. 4:1	-	-	-	-		
Dt. 3:10	-	3	2	3		1
Ag. 3:10	-	2	-	1		
C. 3:8	1	4	1	5		
T. 3:8	1	6	1	11		
Fp. 3:1	-	7	-	5		
H. 2:11	1	2	1	-		1
Carolina	**15**	6		1		1
Margarida	-	1				
Ms. Aldina	-	1	1			
All	2	1	2	2		
Undefined					10+12+ 8+5+7+5+8 +4	7 + 17+7 +5+8+6+ 9 +6

6 children did not write in "we like" column"
6 Children do not write in "we didn't like column"
Only 3 children do not write in any (twin sisters and Diogo A - low attendance)

14 out of 19 children <u>are</u> mensioned in the "we liked" column
11 out of 19 children <u>are</u> mensioned in the "we didn't like column

In the "we did" column in Amoreira most entrances are group activities and are not signed by either the group or an individual child; although, we can find group activities that were derived from individual activities (we listened to Andreias's story)
In the "we want" column there are some projects "preparing Hugo's' party which discriminate different activities. In some projects different children do different things and this is also written down: e.g. doing the Halloween masks: vampire: Diogo, Tadeu, etc). Although most entrances are not signed, there some are specific to individual children.
The group as a community who plans and caries on different activities is again stressed in the diary columns "We did" and "we want". Although not everybody undertakes all the activities it is assumed by the group as something "we did"! The individual plans are planed in the activities chart.

3. Who's in the Magnólia diary columns?

Names Magnólia	Writes in 'We liked'	Writes in 'We didn't like'	Is mentioned in 'we liked'	Is mentioned in 'we didn't like'	Writes in "We did"	Writes in "We want"
Gç 5:8	3	3	-	5	3	7
C. O. 5:8	1	1	-	-	-	-
Sv 5:7	1	-	4	3	1	1
J 5:7	-	2	2	2	9	8
T 5:5	2	2	3	1	8	5
B 5:5	-	1	1	1	10	9
Gl 5:4	-	-	-	-	4	1
Fd 5:4	4	1	1	2	11	11
E 5:3	1	-	-	1	4	3
A 5:3	-	-	-	-	-	-
Dn 5:2	-	-	-	-	2	1
J St5:0	2	4	4	-	4	2
Sb5:0	-	2	-	6	-	-
Fc 4:10	3	-	2	-	5	4
Dg 4:7	-	-	-	1	3	-
J Sv 4:7	-	-	-	1	4	-
C. G. 4:6	-	-	-	2	2	1
Pd 4:6	1	1	-	-	1	-
N 4:2	1	1	-	-	1	3
Pt 4:0	-	1	-	-	3	-
M 3:11	-	-	-	-	-	1
Rd 3:11	-	1	-	-	-	-
Rf 3:09	-	-	-	2	1	-
many	-	1	-	2	6	12
all	-	1	-	1	-	6
Patrícia	1	-	-	-	-	
Rosa	1	-	-	-	-	
Unspecified	-	1	-	-	-	2

10 (43%) children wrote in "we liked" column"
12 children (52%) wrote in "we didn't like column
7 children (30%) did not write in any of the first two columns:
Rf 3:9; M 3:11; C. G. 4:6; J. Sv 4:7; Dg 4:7; Dn 5:2; A 5:3; Gl 5:4;

7 out of 23 (30%) children are mentioned in the "we liked" column
12 out of 23 (52%) children are mentioned in the "we didn't like column

18 (78%) children wrote (signed entries) in 'we did' column
14 (61%) children wrote in 'we want' column

The evaluation/planning columns of the 'Diary' are well participated by the group.
Older children are the ones who use the diary most often.

3. Who is in the Magnólia Daily Plan?

Names Age in Sept.	Sep	Oct	Nov	Jan	Feb	Mar	Apr	May	Jun	Total
Gç 5:8	xx	xxx	xxx	xx	xx	x		xxx	xx	18
C. O. 5:8		xxx	xxx	x		xx	xxx	xxx		15
Sv 5:7	xxx	xx	xxxx	xxx	xx	xxx	xxx	xx	xx	24
J 5:7	xx	xxxx	xx	x	xxx	xx		x	xxxx	19
T 5:5	x	xxx	xxx	xxxxxxxx	xxx	xxxx	x	xxxxx	xx	30
B 5:5	xx	xxx	xxx	x	xxx	xxxxx	xx	xxxxxx	x	26
Gl 5:4		x xx	xx			xx			x	8
Fd 5:4	x	xx	xxxxx	xxxx	xx	xxxxx	xxxx	x	x	25
E 5:3	x	xx	x		x	xxx	xx		x	11
A 5:3	x	xx	xx		xx		x	x	x	10
Dn 5:2		xx		xxx	x	xxx	x	xx	x	13
J St5:0		x xxx	xx	xxxx	x		xxxxx	x		17
Sb5:0	x	xxxx	xxx	xxxxx	xx	x	xxx	xxxx		23
Fc 4:10	xxx	xxxxx	xx	xxx	xxx	xxx	x	xxx	xxxx	27
Total	94:14= 6,7			94:14= 6,7			78:14= 5,6			
Dg 4:7	xx	xx	x	xxx		x	xx	xxxx		15
J Sv 4:7	x	xx	xx	xxxx		x		xx		12
C. G. 4:6	x	xx	xx	xx		x	xx	xxxx	xxx	17
Pd 4:6	x	xx	x	xxxx		xx	xx		x	13
N 4:2	x	x	xx	xx		xxxx		x	x	12
Pt 4:0				xx	x	xxx	x	xxx	xx	12
M 3:11		xx	x		x			x		5
Rd 3:11		xx			x			x		4
Rf 3:09							xx	x		3
	28:9= 3,1			32:9= 3,6			33:9= 3,7			
all			xxx			x		x	x	

Appendix 13 'Transcripts and vignettes from Amoreira CM'

1. Themes discussed in Amoreira MCM

Home matters – helping mothers, bringing things from home to school, different shoes, shopping;

Knowledge of the world - Countries, maps, "What is a city? And a village?"; Traffic lights; Small animal needs: pigs and country life, "piglets were born"; Family living habits; cemetery and deaths; car robbery, terrorism.

Curriculum subjects – Maths, "What is maths?" expressing mathematical ideas, sums

Health and security – Getting seek; riding motorbikes without helmets; police and driving rules: using the seat belt, having your documents; riding in dangerous cars at the March Fair.

Moral issues – Why can't we break the rules? Is it just because the police can catch us up?

Prejudices – Boys and babies; genre issues; gipsies and terrorists: bad and good people.

Personal understanding - Being angry, emotions; new babies. How do we learn? (to ride a bicycle) – age and practice

Cultural, entertainment – Sports (football, swim); Cooking; Media (Nemo's story, Lion King, Harry Potter), media genre: cartoons or actors movies; McDonalds, March fair; toys; Old toys; magazines clubs.

2. Writing a text in Amoreira MCM

6	**Teacher**	So, what shall I write?
7	**C (4:3)**	Once my father brought me… to watch football… .
8	**Teacher**	uhum!
9	**C (4:3)**	… and then….
10	**Teacher**	Where? On the TV or in the field?
11	**C (4:3)**	on the TV.
12	**Teacher**	uhum!
13	**C (4:3)**	and let me watch it with him…. And then we went to eat…..
……..		
14	**Teacher**	So, shall I write …One day? One day or yesterday?
15	**C (4:3)**	it was…. It was today !
16	**Teacher**	Not today! You haven't seen football with daddy today. (C nods) Today?... Before coming to school? (C nods) there was no football this morning!
17	**Dg (5:8)**	Perhaps it was a cassette!....
18	**Teacher**	It was yesterday!.... Was it yesterday? (C nods again) Ah! It was yesterday! So, we're going to write … please help me writing C's text. "Yesterday…."

.....

19 **C (4:3)** Ehee... I was watching with my father... I was watching the football with my father ... at home. ."

20 **Teacher** (writes voicing what she is writing) "Yesterday... I was... watching... football" do we know how to write football?"

29 **L (4:9)** No!

30 **Teacher** we don't know...

31 **Dg (5:8)** Yes we do. It's...

32 **L (4:9)** (points to the Office area) We have it over there, there...

33 **Dg (5:8)** the book about....

34 **Dg (5:8) &**

L (4:9) sports!

35 **Teacher** That's right! The sports book teaches us....

36 **Mn (5:0)** Do you want me to go and get it?

37 **Teacher** To write football. If C needs help then... (Mn stands and fetches the book) Mn, you don't need to get it now, darling. Later, when C will be writing... (Mn turns to the tables) ok?

38 **Mn (5:0)** (nods) C when you will be writing ....

39 **Teacher** "Yesterday I was watching football with ..."

40 **Mn (5:0)** Went you will be writing, tell me where it is...

41 **Teacher** ... "With my father!" Is that so, C? "Yesterday I was watching football with my father"... and who won?

(Amoreira MCM7 May.04 episode total turns:155)

3. Discussing we didn't like column

Carolina moves on to the "we didn't like" column reading Jr's statement "Mn hit me!" L wants to speak but Carolina says that it was Jr who wrote this so he is the one who is going to tell what happened. Jr explains that when he and Mn came to school she was using a dummy (pacifier) and they were seated beside each other and Mn hit him. L wants to speak but Carolina gives the floor to Mn so that she can explain what happened. Td also wants to speak and Carolina say that if he wants to speak about this issue he would have to raise his hand and wait for the presidents to give him the floor. Carolina says that now it is Mn who has to explain... Mn does not speak and Jr comments on her silence. Carolina says that she is thinking, as she might not remember it very well. She invites Mn to tell the group what happened. (Silence) Carolina asks Mn to tell if it was true that she hit Jr. Some children say yes but Mn says no (gesture). Carolina asks if it was not true and Jr tells, "Yes, it is true you liar!" Carolina raises her hand and asks Jr to be calm. Than she looks to Mn and says:

"Jr wrote here in the diary, L saw it, Dg saw it also and you are telling us that you didn't do it?" (She speaks calmly and clearly)

Mn says, "It was because ... they are liars!"

Teacher – Are they liars or is it Mn who cannot remember what happened? Perhaps Mn did not want to hit … perhaps she is not happy with us telling it here… is that it Mn? Are you becoming a bit sad? (Silence. Mn looks down with her face in her hands) Jr says that she is going to start crying and Carolina says "No she is not because we are going to help her… Mn you don't need to cry …(she stands and goes towards Mn and puts her hands on Mn's back comforting her) to the group: "Look Mn is really sad!" L wants to say something and Carolina says, "We are going to listen to L, right?" (She cuddles Mn and looks at L.) L says that he arrived at school and he saw when Mn hit Jr. Carolina says that L saw it and that Mn is now remembering that she hit Jr and she regrets this. She asks if she didn't meant to hit Jr and Mn does not answer. Carolina invites her to go and ask Jr to forgive her and offers her help. She leads Mn towards Jr and Mn allows Carolina to guide her "She is going to ask Jr to forgive her and we are all forgiving Mn!" When Mn is besides Jr Carolina asks her to hug Jr but she doesn't. She then asks her just to touch him on his arm. After a wile she hugs Jr and everybody applauds Mn. Carolina gives a hug to Mn and says that they are all happy and that she is not going to do it again… "She is sometimes still a bit like a baby … she could have still been sleepy, isn't it so Mn? You are not going to hit Jr again, are you?" "it's Ok! Don't cry; only speak about things, all right? Dg says that they agreed to use a silent applause (shaking hands) when they want to applaud in the classroom and Carolina says that this time it was important that they gave a loud applause for Mn as she was very "grown up" being able to ask Jr to forgive her. (FCM Oct 03)

4. Discussing children's tolerance towards each other

The teacher reads T's sentence: "I really like that nobody hits me!" L (4: 6) is the chair and gives the floor to T (4:0) but she does not speak and Carolina asks if she does not want to...(she says she doesn't). Carolina asks L to see if anyone wants to speak and he says that no one has his hand up. Mn raises her hand and he gives her the floor.

Mn (4:9) T is a bit big and a bit small…

Teacher Yes … and what does this has to do with what we are talking?

Mn (4:9) And that's why we cannot hit her, as she is a bit tall and a bit small.

Teacher Only to T we cannot hit?

Jr (6:0) T sometimes is a bit mean and…. Sometimes she hits some children and when she is with Sandra (lunch time) she does not eat sometimes… and sometime she is angry and Sandra also becomes angry with her.

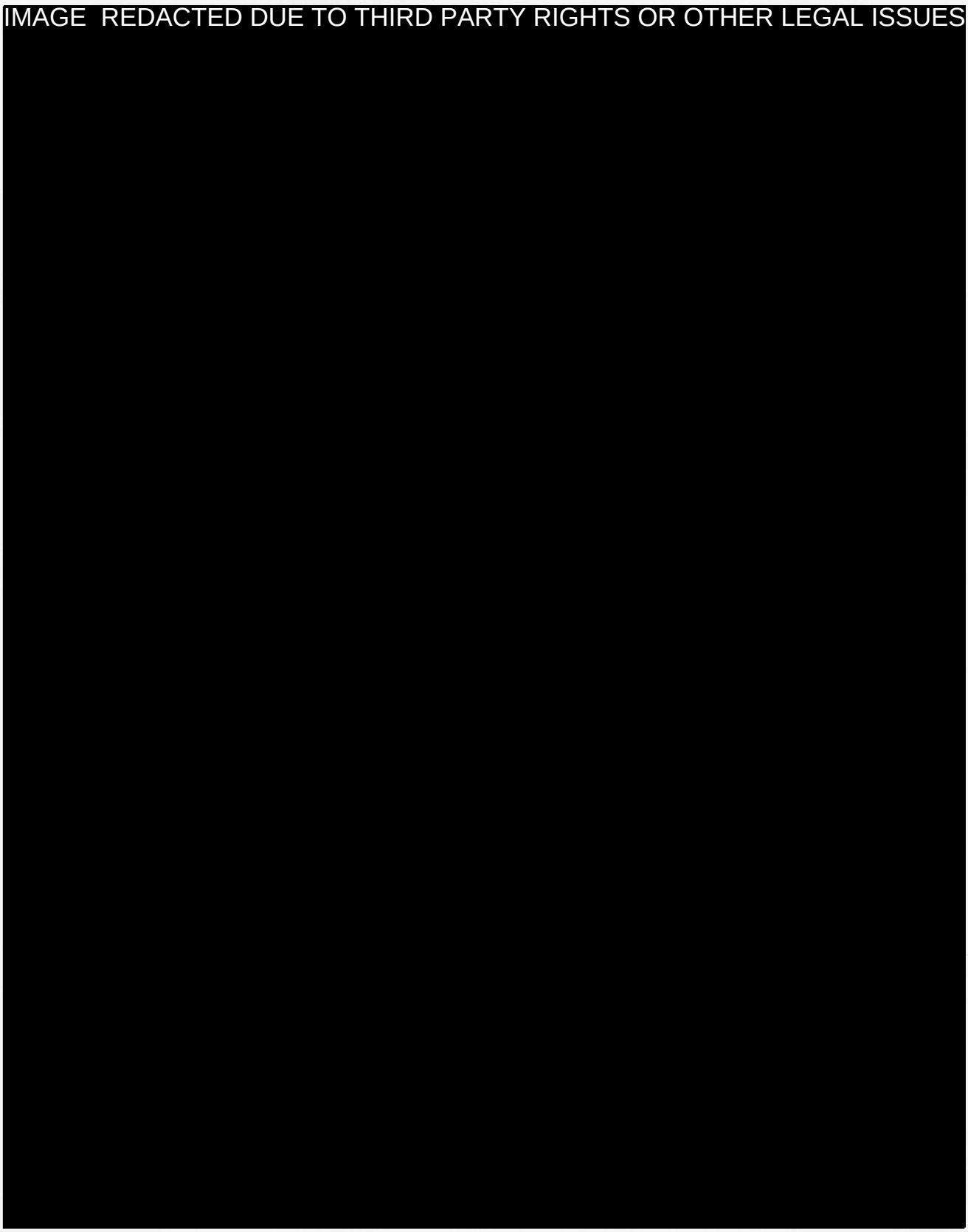
Teacher Anyway, what T wrote here is that she is happy because nobody hits her. So despite that she does not behave very well sometimes you are patient with her and you do not hit her, is that it? Jr agrees… and Carolina says "Congratulations!"

L (4:6) is it solved?

T (4:0) yes

(FCM6 Feb 04)

Appendix 14 'Magnólia children's writings during CM'



Appendix 15 'Transcripts and vignettes from Magnólia CM'

1. Patricia's planning system

It is a very special Council meeting. Although everyday we have a small meeting to see how our day went, Friday CM is much more important. It is the CM where we read the Diary, thus we read everything that happened during the week; it is the moment where we discuss seriously the moral attitudes that occurred throughout the week, this is from where social rules emerge, and therefore those rules are discussed in the group. It is the time of the week where they evaluate the "we want" column and what in fact was done, which is in the "we did" column; therefore, all the wishes (plans) they had and what they where able to do and what needs to be carried on the next week. All this work of evaluation and pre-planning is written in the CM minutes; the minutes are read on the Monday morning CM. Monday morning planning starts with reading the minutes and this pre-plan we did during the Friday CM. This work is done in the Friday CM and not on the everyday evaluations during the week. During the week it's only to know "look, it was done" and make a note in the Daily Plan or write it in the Diary. But, it is never such a systematic evaluation as is done on the Friday CM where we seriously evaluate the Diary. We read the four columns, we discuss and we try to reach some conclusions. (Patrícia#1)

2. Planning during MCM

(The group is planning to make some cooking during the week)
"Nobody seems to follow Patrícia's thinking.
Teacher It seems that this is the first time we…do you know what the problem is? Nobody listens! Everybody wants to talk but nobody listens to the others. Then, when you don't listen you don't think, when you don't think you say wrong things!"
T(5:9) We have to give the recipe to J's mother!"
Teacher No! Where is the recipe going?
Fd (5:8) To the kitchen!"
Teacher Why?
Some children For them to do the cake!"
Teacher for them to do the cake?" (Criticism)
Fd (5:8) No!
Teacher So?
T (5:8)& others to prepare…
Teacher The things!... you see? When the head thinks things are talked…. So we have to write the recipe to send to the kitchen (she writes) (very illustrative statement of this teacher's pedagogy)"(MCM4Magnólia)

Appendix 16 Analysis of the Activities Charts

Amoreira

1. Mean number of activities per month planned in each area of the AC

Type of activity	Classroom Area	Mean number / month	
Sociodramatic Play	Make-believe	49	
Games	Table games	22	
	Constructions	20	
Reading & writing	Office	22	34
	Library	13	
Art Atelier	Painting	17	88
	Cuttings	12	
	Modelling	18	
	Black board	8	
	Factory	17	
	Tapestry	2	
	Drawing	14	
Science	Laboratory	4	
Writing, games, drawings & games	Computer	21	
Maths	Maths	28	

2. Mean number of activities per age group registered in the Amoreira AC

Type of activity	Classroom Area	Mean number of activities / age group					
		3 N=6	4 N=7	5 N=6	3 N=6	4 N=7	5 N=6
Sociodramatic Play	Make-believe	19,8	18,4	10,8	**19,8**	**18,4**	**10,8**
Games	Table games	7,6	6,2	7	**14,3**	**12,4**	**14**
	Constructions	6,7	6,2	7			
Reading & writing	Office	4,8	7,4	10,6	**8**	**10,8**	**16**
	Library	3,2	3,4	5,4			
Art Atelier	Painting	5,7	5,2	5	**31,9**	**29**	**40,4**
	Cuttings	5,7	4,2	4,4			
	Modelling	8,3	5,8	5,2			
	Black board	3,2	2	3,6			
	Factory	4,8	5,2	11,4			
	Tapestry	0,5	0,2	1			
	Drawing	3,7	6,4	9,8			
Science & Maths *	Laboratory	0,3	1,2	3,4	**6,1**	**4,6**	**8,8**
	Maths	5,8	3,4	5,4			
Writing, games & drawings	Computer	5,3	6,4	8	**5,3**	**6,4**	**8**
Total					**85,4**	**81,6**	**98**

With an age range from 2 years 11 months (in September) to 5 years 8 months, the group was divided into three age groups – 3, 4 and 5 years olds. The results of the 4 years old group have to be interpret cautiously as this group included children with poor attendance rates.

3. Participation in projects Amoreira

Name & Age in September	Number of projects in the year
Jr. (5:8)	5
V. (5:8)	-
Ad. (5:6)	4
Mr. (5:3)	1
Dg. (5:1)	6
Fr. (5:0)*	2
Js. (4:8)*	-
Tn. (4:8)*	-
Td. (4:8)	2
Mn. (4:5)	4
Dn. (4:4)*	-
L. (4:2)	4
D. A. (4:1)*	-
Dt. (3:10)	2
Ag. (3:10)	-
C. (3:8)	-
T. (3:8)	-
Fp. (3:1)	-
H. (2:11)*	-

Magnólia

4. Mean number of activities per month planned in each area of the AC

Type of activity	Activity / Classroom Area	Mean number / month	
Art	Drawing	95	**213**
	Painting	37	
	Cut & paste	28	
	Modelling *	20	
	Digitinta *	8	
	Illustration	6	
	Monotipia *	9	
	Tapestry	10	
Reading and Writing	Library	36	**99**
	Office	41	
	Printing press *	9	
	Text Work *	5	
	Limógrafo *	3	
	Computer	5	
Sociodramatic play	Home Corner	32	**92**
	Garage	60	
Games	Games	74	**74**
Science and maths	Experiments	11	**51**
	Games with water	32	
	Cooking *	8	

* activities where children need an adult to engage in – not immediately available

As the range of ages includes only children from 3 years 9 months (in September) to 5 years 8 months, the Magnólia group was divided into two age groups: younger children - 3:9 to 4:7 years, and older children - 4:10 to 5:8 years old.

5. Mean number of activities per age group registered in the Magnólia AC

Type of activity	Activity / Classroom Area	Mean number activities/ child			
		Younger N=9	Older N= 14	Younger N=9	Older N=14
Art	Drawing	31	35,2	**65,7**	**71,8**
	Painting	12,1	10,9		
	Cut & paste	10	7,7		
	Modelling	5,6	6,6		
	Digitinta	2,2	2,5		
	Illustration	1,3	2,1		
	Monotipia	2,9	2,4		
	Tapestry	0,6	4,4		
Reading and Writing	Library	11,6	10,7	**26,3**	**31,6**
	Office	10,9	12,7		
	Printing press	1,4	3,3		
	Text Work	0,6	1		
	Limógrafo	1,1	2,1		
	Computer	0,7	1,8		
Sociodramatic play	Home Corner	10	9,5	**28,6**	**27,3**
	Garage	18,6	17,8		
Games	Games	23,6	21,5	**23,6**	**21,5**
Science and maths	Experiments	1,6	4,6	**16,2**	**15,6**
	Games with water	12	8,4		
	Cooking	2,6	2,6		
Total				**160,4**	**167,8**

Name & Age in September	Number of projects
Gç. (5:8)	8
C. O. (5:8)	3
Sv. (5:7)	5
J. (5:7)	5
T. (5:5)	6
B. (5:5)	7
Gl. (5:4)	1
Fd. (5:4)	7
E. (5:3)	2
A. (5:3)	1
Dn. (5:2)	2
J. St. (5:0)	4
Sb. (5:0)	6
Fc. (4:10)	8
Dg. (4:7)	3
J. Sv. (4:7)	4
C. G. (4:6)	1
Pd. (4:6)	3
N. (4:2)	3
Pt. (4:0)	4
M. (3:11)	2
Rd. (3:11)	1
Rf. (3:09)	-

Appendix 17 'Transcripts from A& P in Amoreira'

1. Criteria used in planning with the AC

Responsibility in carrying out what was planned before – "do I have any open circles?" (41 entries)

> The teacher goes towards the home corner where Td. (4:10) is playing medical doctors.
> **Teacher** Excuse me Doctor but I think you had something else to do before this. Can you come with me?
> The teacher leads Td to the AC and checks with him that he had planned going to the Office the day before.
> **Teacher** It was Td who chose, wasn't it? (Td. does not seam to remember; in fact he had marked this circle by mistake two days ago). Thank god it is written in here so that we do not forget. So, first you go to the office and then to the home corner. You're lucky to have two friends here that can help you. They will explain what you can do in the office. The teacher goes with Td to the office and asks Jr. (5:10) and L. (4:4) to teach Td. (4:10) what one can do in the office, as he had never been there. She asks them to explain what one can do first and next, etc.
> **Teacher** I rely on you to help Td.
>
> (Amoreira November)

Free choice – simply expressing the wiling to go to a particular area without any justification beyond " I want to go" (31 entries)

> D. A. (4:5) comes to mark his activity and the teacher helps him choose. He wants to go to the lab. (Amoreira February)

Diversity of choices – based on the principle of learning as practicing a good plan should be directed to the activities that were less chosen or where children have difficulties. (25 entries)

> The teacher speaks with T (4:3) about the Lab where she had no circles marked. She mentions the rice and the things she can do in there. T goes to the Lab and Ag (4:5) joins her later.
>
> (Amoreira May)

Time management – Planning according to the time available and the type of activities children want to engage in. (12 entries)

> Mr. (5:8) planned to go to the office.
> **Teacher** do you think you're going to do a very complicated piece of work in the office?
> **Mr.** No.
> **Teacher** So, do you think you will have time for another activity? Look, it is 11.10 am and the long hand has still to go around until here

(she shows her the watch). You have almost half an hour to work. (Mr chooses office and table games). (Amoreira March)

Goals and processes – planning to go to a specific area is related to a plan which includes set goals (what) and processes (how). (11 entries)

Teacher What do you want to do? Do you want to make the present to take home?
L (4:8) nods.
Teacher so, what do you have to do?
L. (4:8) to the factory (he does a circle at the factory)
(Amoreira March)

Collaboration with peers – choice of activities is determined by the child's wish to do something with a colleague or by the teacher's invitation to collaborate or to peer-tutoring. (11 entries)

Teacher L, D A (4:5) wants to go to the Lab but he doesn't want to go alone.
L. (4:6) I'm going with him!
(Amoreira February)

Places available – the limited places in each area constrain the choices. (7 entries)

C. (4:1) I am going to write another activity because the office is full. (Amoreira March)

Order of action – Choosing the first activity is also something children must account for. (2 entries)

Dg (5:3) I am going to mark first here in the make-believe area. I have to say which one I will do first (he explains to me). I am going to the make-believe.
(Amoreira November)

2. Carolina supporting engagement with materials and practices

Carolina helps Fp (3:6) to fetch her notebook and find space to work. Carolina shows to Fp T's notebook and explains that T did some writing on the typewriter and that she pasted it into her notebook. Then, she asks Fp if she wants to do the same kind of work and Fp. agrees. Carolina demonstrates how to start: fetching a piece of paper, putting the paper in the typewriter, rolling the paper until it gets to the right position, etc.
T Now you can write whatever you like. You can find your letters, write your name, whatever you like. I am going to write in here the date: "17th of March" I have already typed. Now I am going to change the line. Now you do whatever you like. For instance Fp's letter using your nametag… (Amoreira March)

3. Practice as mastering technical skills

In the following transcript Carolina supports Dg in producing a painting which encompasses quite complex challenges.

> Dg. (5:7) continues to do his painting in a long vertical piece of paper that he chose. Carolina helps him organize the elements in the paper, establishing different plans: the earth, and underneath ... the place where the ferrets live. Dg has an acute self-critical approach and his capacities to use manual arts material do not match his expectations. Carolina knows that he needs to be reassured in terms of results and helps him master some technical strategies using the materials: using the thin brush to do the details, dominating the brush movement so that it doesn't show the coats of the brush (she holds his hand doing the movement), doing a second time with more paint if the line is not filled. Dg paints each detail and stops to look and evaluate. He is under a certain kind of tension. He delays making each detail, hesitates and now and then still needs the teacher for some help.(Amoreira April)

4. Carolina supporting engagement in meaningful activities projects

> Carolina supports the Animals Project group (Dg. (5:8), Jr. (6:3), Ad. (6:1) and Dt. (4:5) in the Multipurpose area.
>
> **Teacher** So, let's see what are you doing?
> **Dt.** Cutting up the animals.
> **Teacher** What for? What did you want to do?
> **Jr.** We wanted to do an animals' file... like the one saying mother and father.
> **Teacher** And you put just the animals like this... or you would organize them in some way?
> **Dg.** No. We would organize them in ... the wild and the domestic
> **Teacher** So we know already that you want to do an animals file to learn how to write the names of the wild and domestic animals.
> **Teacher** (writes) "Cutting the animals ... who?
> **Ad.** Me and Dt.
> **Teacher** Pasting the animals... Who is doing it?
> **Dg.** All.
> Carolina writes everything in the paper
> **Teacher** and then?.... weren't we going to separate the wild from the domestic? (Amoreira May)

5. Using questions to promote thinking

Two projects are running side by side at the Multipurpose area. The Animals words file with Jr. (6:3) and Dg. (5:8) and Sports book with Mr. (5:10) and Mn. (5:0). The children come together commenting on the project's similarities (cutting and pasting Jr.) and differences (animals and sports Dg.). They start to give all the Sports names and Carolina invites Mn to write motociclismo (motorcycling).

Teacher How do you think it might be?... Mr?... MO.... Like what?

Mr. Mn.!.

Teacher and how do we write?

Mr. an M and a O

Teacher MOTO ... and TO?

Dg. Toyota.

Mn. Toni. (Mn's father's name)

They keep on with this game of finding out how to write words through using words they already know. Carolina supports the writing of the most difficult parts.

Appendix 18 Transcripts of A& P interactions in Magnólia

1. Criteria used in planning with the AC

Free choice – (10) choice of activities based simply on the child's interest/ motivation.

> J Sv (5:0) runs to plan his activities and puts four cards at his name: Games, drawing, library and garage. (Magnólia February)

Collaboration with peers (10) – Children choices are often bounded by their desire to be next to a friend. Patrícia, at times, also encourages friends to choose the same activities.

> **J 5:9** I am going to the office and then to the garage.
> **M 4:1** I'm going also! (she looks at J.'s cards and puts the same ones into her name slot). (Magnólia November)

Places available (8) - This criterion was mostly used in relation with the home corner, which was the area with limited number of places that children most choose. Children had sometimes to compete for places planning as soon as possible.

> J. Sv. (4:11) and Pd. (4:10) want to go to the home corner and Fd. (5:8) tells them that they already went yesterday. The teacher adds that they have to give the opportunity to others. (Magnólia January)

Diversity of choices (5) – this criterion implied choosing activities that the child had been less involved in, and also doing activities other than play (games, home corner, garage). (see 'order of action' criteria bellow)

> **Teacher** Fc. (5:2), are you going to be enclosed at the experiments all day? (She also tells him that he has few texts.)
> Fc. (5:2) decides to go first to the experiments, then to modelling and then to do a text and he puts his cards in this order. (Magnólia January)

Time managing (5) – mainly related with the amount of activities one can plan for a day. (see previous transcript)

Order of action (5) – Patrícia invites children to use the planning AC to think about the order in which they will carry out their plans.

> **Teacher** Pd, after the games?
> **Pd. (4:8)** Garage.
> **Teacher** Garage right after the games? Why don't you go with your friend J. Sv. (4:9) do Cut & Paste? (Pd. (4:8) accepts) And then? Why don't you go drawing, which you haven't done for a long time? A beautiful drawing, all right? (Pd. (4:8) says yes) Ok, then, after finishing your drawing you then go to the garage.
> (Magnólia November)

Goals and Processes (3) – This includes specifying how they will go about the activities or the linking the children's goal oriented activities to specific areas of the classroom.

> Patrícia asks M. (4:6) what she wants to do and she says cut & paste and drawing. She then asks what kind of materials she needs and helps her to recall what she needs in order to start: You will need a scissors, the magazines, and the glue and the paper. Are you going to sit at the table? M (4:6) nods and moves on. (Magnólia November)

2. Supporting inquiry

> The snails project group is Gç. (6:4), Dg. (5:3), Sb. (5:8), Sv. (6:3), and B. (6:1). One of the questions was about the liquid the snails leave when they move. Patrícia sat with the group at the library where they have books, the shoebox with the snails and paper, pens and crayons. They decided to put a piece of clear glass on top of the shoebox. Patrícia shows the children the sticking liquid that snails left on the glass. She is enthusiastic and the children get very involved.
> **Teacher** Look, here the liquid, can you see?
> **Dg.** he leaves this kind of snot (mucus) when he goes up. The box is wet where he has passed.
> **Teacher** what do you think this might be?
> **Gç.** – I think it's water... Perhaps it is pee?
> Patrícia registers what the children say. They decide to have a look into the books to see what is happening. Patrícia reads and summarises the information. Then asks the children what they will do. Children propose to draw what they did. Sb. draws the glass and a snail.
> Patrícia fetches more tables so that there is space for everything and each child has a space to work.
> **Teacher** Now, you don't need me any more, do you? You know what you are doing.
> **Gç** and then? What am I going to do?
> **Teacher** you know you have several things that you learned. (shows the books and images) You remember the questions we asked don't you?... You could perhaps draw this, the snail shell inside, ...
> The children talk to each other explaining the drawings they are doing.
> (Magnólia May)

3. Supporting inquiry

> Patrícia talks with Fc. (5:4) about the millipedes. Other children join them: J. St. (5:6), Fc. (5:4), Rf. (4:3), Pt. (4:6), J. Sv. (5:1), Pd. (5:0) and Fd. (5:10). Patrícia puts the worm in her hand so that everybody can look at its feet.
> ? it's like a spider!
> **Rf.** It seems they have two heads.
> **Teacher** what do you think it is doing with its feelers?
> **Fd.** It doesn't have any teeth!
> **Teacher** oh, that I don't know!

Fc. it is smelling.
Teacher is it?
Pt. but they do 'cocó' (poo). (Faeces, excrement)
Rf. No they don't!
Pt. Patrícia, all animals do poo, don't they?
Teacher Look at its feet when it gets up in the air....
...
J. St. Patrícia do you think that if it goes round like this it's going to break?
Teacher No! I don't think so. Let's see.
Patrícia puts the worm in her hand and touches it with her finger so that it will roll itself up.
Teacher No! Can you see?
J. St. Look, and if we got another one ... Would they have kids?
Teacher that part I don't know!!
Fd. That part we should do a Project about! (Magnólia May)

3. Peer-tutoring

a) N. (4:8) wants to draw a rainbow for the storybook they are doing. She asks her colleagues what are the colours of the rainbow. Some children say the colours but they can't tell in which order they come. B. (5:11) suggests she goes to the library to look for a book where she can see the rainbow colours. They go together. At the library while N. searches for books without an apparent strategy, B. says he is going to search for one about the weather. He finds one and calls N. to see it. They open the book and find a rainbow and they bring the book back to the big table where they are drawing. They put the book in front of them and continue to do the illustrations as they comment the pictures in the book.

(Magnólia March)

b) Pd. (5:1), Sv. (6:2), Fd. (5:11) Pt. (4:7) and T. (6:0) in the experiments area are planning the PE class. Patrícia has been structuring the activity with them and now they do what they planned. Each one has a piece of paper were they wrote some letters and numbers form 1 to 5. They decided to plan and draw one game each for the PE section.
Pd. (starts crying) I can't do it.
One child tells Patrícia who is at the big table.
Teacher – He is able, yes he is! He can do much more than what he thinks. Pd. (5:1) looks puzzled and asks me for help. I tell the others that Pd might need help. Sv. offers to help
Sv. I will help you... look... (he is about to draw into Pd.'s paper and Fd grabs the paper.
Fd. It's not doing! It's teaching. .
Sv. But he can copy.
Fd. No, tell him how to do it. .
Sv. Look Pd., you do a circle and then you write inside here.

Sv. (6:2) is concerned with helping Pd. and creating empathy. He leans over the table and looks into Pd. Eyes trying to explain carefully so that he understands. Fd. provides explanations and dictates some instructions to Pd.

Fd. Do an S.
Pd. I can't.
Sv. come on, try!(encouraging)
Pd. (looking more confident) Perhaps it's better that you can do it first in here (points to his paper).
Sv. shows him an S and Pd. copies.
Pd. Sv, Sv. is it right?
Sv. (6:2) Let me see (Pd has done a reverse S looking like a 2) It's not a 2 it's an S. Come on do an S.
Pd. (5:1) does not feel confident about his capacities and asks T to help him. The classroom community sees T as a competent girl in writing and drawing. She comes closer to Pd. holds his pen and is going to start writing. She hesitates and tells Pd. to hold on the back of the pen so that they hold it together. T commands the gesture and does an S with Pd.

(Magnólia April)

4. Peer collaboration

A group of boys (J. (6:1); Sv. (6:1); Fd. (5:10) and B. (5:11) are outside to paint a panel on the school building. As usual Patrícia started by supporting them in organizing and defining the goals and the actions they would need to take. They are now on their own and start to decide what each one will do.

J. I am, going to do the roofing tile
Sv. I will do it!
Fd. I am waiting for you to stop painting…
B. starts painting without discussing with colleagues and the others complain.
Fd. (looking at the tiles floor) I am going to paint the ground in orange. (Contrary to what he mentioned he grabs the brown paint and starts painting).
J. it can't be brown!
Sv. Fd. It can't be brown!
Fd. Why?
Sv. because it will not look like our school!
Fd. It can be as I want!
J. No, cause we will not be able to see that it's our school.
….. Patrícia comes and they decide to start a new one. She provides clear directions and support in starting the new painting.
Fd. I don't need help!
J. we can help each other which is much easier!
Fd. I don't pass it over again! Ok, then I will do it also!
Sv. I am going to write in the diary if you do this! I am going to tell (Patrícia)
J. I give up.
Fd. Me to. (Magnólia March)

Appendix 19 CT Episodes types and focus

1. Number of CT episodes by type and focus in Amoreira class

Type	Focus	Number of Episodes
PRE – Children show the group something they have done and tell what it is, and how they did. Includes questions, evaluation and suggestions.	Responsibilities (wrapping, folders)	5
	Games and puzzles	14
	Play Dough	16
	Painting	3
	Drawing	40
	Cut and paste	12
	Junk modelling /arts & crafts	16
	Constructions	19
	Pretend Play + drama	5
	Text	36
	Writing	30
	Maths	9
	Computer	5
	Drawing as record (recipe, experiment, junkmodel)	18
	Experiments	5
	Projects	5
	Total	**238**
DEC – taking decisions in group	Tidying up Christmas decorations	1
DIS –issues to be discussed by the group	Discussion about the meanings of not presenting work during CT	1
	Discussing the rules in CT: we cannot present if it is not finished	1

2. Number of CT episodes by type and focus in Magnólia class

Type	Focus	Number of Episodes
PRE – Children show the group something they have done and tell what it is, and how they did. Includes questions, evaluation and suggestions.	Experiments	2
	Book from home (telling a story)	1
	Drawing	6
	Inquiry (project)	7
	Drawing for projects	1
	Planning (Project; PE)	5
	Writing	6
	Discussion a newspaper (war)	1
	Papier mâché	1
	Texts	5
	Painting (correspondents)	1
	Problem solving - maths (correspondents)	1
	Play dough (linked with project)	5
	Total PRE	**42**
DEC – children take decisions as a group	Deciding the rules for playing the computer games	1
	Choosing illustration for invitation	1
	Total DEC	**2**
DIS –issues to be discussed by the group	Conversation about a problem with medicine	1
	Discussing war	1
	Total DIS	**2**
PLAN – planning projects / act.	Planning a project	**6**
COMP – complement presented activity	Writing a letter	2
	Extending a text	1
	Total COMP	**3**
ACT – doing a whole group activity	Interviewing the Head	1
	Observation of chickens	1
	Rehearsal of a play	2
	Story	4
	Total ACT	**8**

Appendix 20 'Patterns of participation in CT'

Number of CT presentations by children in both classrooms

Magnólia classroom			
Name	**Age in September**	**Number of communications**	
Gç	5:8	Xxx	3
C O.	5:8	Xx	2
Sv	5:7	Xxxxxxxxx	9
J	5:7	Xxxxxx	6
T	5:5	Xxxxxx	6
B	5:5	X	1
Gl	5:4		0
Fd	5:4	Xxxxxxxx	8
E	5:3		0
A	5:3	Xxxx	4
Dn	5:2	Xxx x	4
J St	5:0	Xxxxx	5
Sb	5:0	Xxxx	4
Fc	4:10	Xxxxxx	6
Dg	4:7	Xx	2
J Sv	4:7	Xx	2
CG.	4:6	X	1
Pd	4:6	Xxxx	4
N	4:2	X	5
Pt	4:0	Xxx	3
M	3:11	X	1
Rd	3:11	-	0
Rf	3:09	X	1

Amoreira classroom			
Name	**Age in September**	**Number of communications**	
Jr	5:8	Xxxxxxxxxxxxxxxxxxxxxxxxx	26
V	5:8	Xxxxxxxxxxxxxx	16
Ad	5:6	Xxxxxxxxxxxxxxxxxx	20
Mr	5:3	Xxxxxxxxxxx	12
Dg	5:1	Xxxxxxxxxxxxxxxxxx	20
Fr *	5:0	Xxxxx	5
Js *	4:8	Xxx	3
Tn *	4:8	Xxxxxxx	8
Td	4:8	Xxxxxxxxxx	11
Mn	4:5	Xxxxxxxxxxxxxxxxxxxxxxxxx	27
Dn*	4:4	Xxxxxx	7
L	4:2	Xxxxxxxxxxxxxxxxxxx	22
D A *	4:1	Xxxxxxx	8
Dt	3:10	Xxxxxxx	7
Ag *	3:10	xxxxx	5
C	3:8	Xxxxxxxxxxxxxxxxxx	20
T	3:8	Xxxxxxxxxxxxxxx	17
Fp	3:1	Xxxxxxxxxxxx	13
H *	2:11	Xxxx	4
* Children with significant absence from school			

Gender of Children presenting and group composition

	Girls Presenting	Girls in group	Boys Presenting	Boys in group
Magnólia classroom	F = 16 24%	F = 8 35%	F = 52 **76%**	F = 15 65%
Amoreira classroom	F = 160 **64%**	F = 13 68%	F = 90 36%	F = 6 32%

Age of Children presenting and group composition

	Magnólia			**Amoreira**		
	Children presenting	Children October	Children May	Children presenting	Children October	Children May
3 years old	-	F = 3 13%	-	F =35 14%	F = 6 32%	F = 2 11%
4 years old	F = 12 18%	F = 7 30%	F = 5 22%	F = 109 **44%**	F = 7 36%	F = 7 37%
5 years old	F = 47 **69%**	F = 13 57%	F = 10 43%	F = 76 30%	F = 6 32%	F = 7 37%
6 years old	F = 9 13%	-	F = 8 35%	F = 30 12%	-	F = 3 15%

Appendix 21 'Transcripts from CT Amoreira'

1. Children's talk about processes in CT

- How (processes, time sequence of actions)

Mn (4:11) and than I did the photo… than I did the computer on my own…

(CTAmoreira13 – ep 2)

- Resources (with whom, using which materials)

Dt (3:10) I played, I had a skirt, a small one and a big one, … and …

(CT Amoreira 13 – ep. 1)

- Rationales for decisions

Mn (4:5) because the doll had no feet and I did it!

(CT Amoreira 1 – ep. 5)

Ad (5:6) So, we did a house and we've put the animals here so that they would not get cold.

(CT Amoreira 13 – ep. 4)

- Difficulties and strategies (asking others to help, think carefully when doing things, paying attention),

1 **Teacher** He did the doll and also the drawing (photo) of the doll. [T helps L (4:2) to hold the two works side by side] Who gave you a little help?

2 **L (4:2)** It was Fr.

3 **Teacher** He was saying that he couldn't do the hair and so Fr (5:0) gave him some help with the hair. The curly hair [T points to L's drawing]

4 **L (4:2)** and the skirt!

5 Teacher And the skirt. The skirt was also a bit difficult and he was doing the feet … we can tell that this is a corn doll, can we?[raises the photo in order that the group can see].

(CT Amoreira 1 – ep. 4)

2. Assessment criteria conveyed in Amoreira CT.

ref	Criteria	Reference	Process / product focus	Evaluative / descriptive
1	Realism of "photo"	Amoreira1 – ep. 2, 3, 4, 5 (photo)	Product	Descriptive
2	Paying attention being concentrated	Amoreira1 – ep. 2, 4, (photo)	Process	Descriptive
3	Being careful	Amoreira1 – ep. 3 (photo), Amoreira13- ep. 4 (constructions)	Process	Descriptive
4	Realism of construction doing like real ones	Amoreira 1 – ep. 12 (construction); Amoreira 13 – ep. 3, 4 (construction)	Product	Descriptive
5	Doing what was agreed (responsibility)	Amoreira 1 – ep. 6 (photo), 8 (drawings)		
6	Enjoyment	Amoreira 13 – ep. 1(pretend play), 4, 5 (construction)	Process	Descriptive
7	Doing for the first time, trying out new activities	Amoreira 1 – ep. 7 (Writing in typewriter) Amoreira 13 – ep. 12 (construction)	Process	Descriptive
8	Group agreement cooperation	Amoreira 1 – ep. 9 (text) Amoreira 13 – ep. 1(pretend play), 4, 5 (construction),	Process	Descriptive
9	Working hard	Amoreira 13 – ep. 4 (construction)	Process	Descriptive
10	Thinking while doing	Amoreira 1 – ep. 2, 4, 5 ("photo"); Amoreira 13 – ep. 3 (construction)	Process	Descriptive
11	Solid technology	Amoreira 13 – ep. 4 (construction)	Product	Descriptive
12	Technological and manual skills	Amoreira 1 – ep. 11 (play dough) Amoreira 13 – ep. 4 (construction)	Process	Descriptive
13	Using rationales	Amoreira 1 – ep. 5 (corn doll and "photo"), Amoreira13 – ep. 4 (construction)	Process	Descriptive
14	Being responsible for others	Amoreira 13 – ep. 5 (construction)	Process	Descriptive
15	Finding good conditions to work (number of children)	Amoreira 13 – ep. 5 (construction)	Process	Descriptive
16	Speaking clearly, using specialised words	Amoreira 13 – ep. 2 (printing a photograph in the computer)	Process	Descriptive
17	Persistence despite frustration	Amoreira 13 – ep. 4 construct.	Process	Descriptive

Appendix 22 'Transcripts from CT Magnólia'

1. Patricia's view of CT

> "We start in the beginning of the year by communicating just inside our classroom, from a small group to the whole group. Then later on, we start to go beyond the classroom by sharing with other classrooms and now, we have already made some intervention in the community, based on some work they've done we've been extending the field where they intervene. So, all these things are important and the resources that they can build may be an exhibition for parents, or leaflets to be circulated in the neighbourhood because of the firemen, their were several communication occasions where they understood that they (the children) have something to teach."(Magnólia #4)

2. Children's talk about processes in CT

- How (processes, time sequence of actions)

B (5:5) First I had to copy the names ... and than I wrote the numbers.

(CT Magnólia 1 – ep. 2)

- Resources (with whom, using which materials)

C O (5:8) – we were the three together in the multipurpose area...

(CT Magnólia 9 – ep. 1)

- Rationales for decisions – how they found out

Teacher – So, how did you find this out? [points to numbers in each column]

B (5:5) I went asking the children

(CT Magnólia 1 – ep 2)

- What they found out

Teacher – and... you found that...

B(5:5) – There were less children in number 3.

Teacher – There were fewer children who had lost three teeth, weren't there?

3. Assessment criteria conveyed in Magnólia CT.

ref	Criteria	Reference	Process / product focus	Evaluative / descriptive
1	Organizing information	CT 1 – ep. 2 (inquiry)	Process	Descriptive
2	Writing well,	CT 1 – ep. 2 (inquiry)	Product	Evaluative
3	"not writing silly things"	CT 1 – ep. 2 (inquiry)	Process	Evaluative
4	Answer to the goals of activity	CT 1 – ep. 3 (choosing illustrations)	Process	Descriptive
5	"working well",	15.10.03 field notes - ep 1 (inquiry)	Process	Evaluative
6	"finding important things"	15.10.03 field notes - ep 1 (inquiry)	Product	Evaluative
7	"clever work"	CT2 epi2	Product	Evaluative
8	"working well together"	CT8 epi 1 (children's planning PE section)	Process	Descriptive /evaluative
9	Important choice	CT 9 – ep. 1 (newspaper)	Process	Evaluative

Appendix 23 'Focus children's age and gender'

Amoreira children pseudonyms	Age in September	Gender
Mr	5:3	Girl
Dg	5:1	Boy
Dn	4:4	Girl
L	4:2	Boy
C	3:8	Girl
H	2:11	Boy

Magnólia children pseudonyms	Age in September	Gender
J	5:7	Boy
Dn	5:2	Girl
Dg	4:7	Boy
Pt	4:2	Girl
Rd	3:11	Boy
M	3:11	Girl